Synopsis of the Thesis:

"EFFECTS OF INDIVIDUAL ATTRIBUTES, CONTEXTUAL ATTRIBUTES, AND MORAL INTENSITY ON ETHICAL DECISION-MAKING OF PROFESSIONAL ACCOUNTANTS: *A STUDY WITH REFERENCE TO AUTHORIZED ACCOUNTANTS IN ETHIOPIA*"

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Abbreviations

AABE	Accounting and Auditing Board of Ethiopia
AVE	Average variance extracted
CE-FDH	Ceiling envelopment-free disposal hull
cIPMA	Combined importance-performance map analysis
CNE	Concentration of effect
ECQ	Ethical Climate Questionnaire
EDM	Ethical decision-making
EPQ	Ethics Position Questionnaire
H	Hypothesis
HTMT	Heterotrait-monotrait
IDA	Idealism
IPMA	Importance-performance map analysis
IRO	Intrinsic religious orientation
LPC	Laws/professional codes
MBH	Moral behavior
MCA	Metropolitan city administration
MCQ	Magnitude of consequences
MIS	Moral intensity
MIT	Moral intent
MJD	Moral judgment
MRC	Moral recognition
NCA	Necessary condition analysis
NFI	Normed fit index
NN	Not necessary
OL	Outer loadings
OW	Outer weights
PBE	Probability of effect
PGP	Peer group pressure
PLS-SEM	Partial least squares structural equation modeling
PRX	Proximity
RC	Reverse coded
rho_a	Reliability coefficient
rho_c	Composite reliability
RLV	Relativism
RO	Research objectives
SCN	Social consensus
SEM	Structural equation modeling
SPSS	Statistical Package for the Social Sciences
SRMR	Standardized root mean square residual
TIM	Temporal immediacy
VIF	Variance inflation factor

1. Introduction

In the accounting profession, ethical dilemmas frequently arise when accountants encounter conflicting values, principles, or responsibilities. Maintaining ethical behavior is crucial for preserving the profession's reputation, yet numerous scandals, such as those involving Enron and WorldCom, have exposed ethical failures. These events led to stricter regulatory oversight and reforms in governance and accounting practices. Ethical issues like conflicts of interest, insider dealings, and failure to maintain objectivity have been highlighted (Mintz & Morris, 2017), often resulting from accountants prioritizing self-interest or client interest over public interest. As a result, growing public awareness increasingly challenges accountants to adhere to ethical standards.

Dunn and Sainty (2019) emphasize the need for accounting professionals to deepen their understanding of ethical decision-making (EDM). Barnett (2001) stressed the importance of understanding individual, contextual, and issue-related factors in promoting ethical behavior. Empirical studies have examined individual attributes such as age, gender, education, religion, work experience, moral philosophy, and nationality to determine their effects on EDM (Johari et al., 2017; Kportorgbi et al., 2022; Latan et al., 2019; Musbah et al., 2016). Contextual factors, such as ethical climate, national culture, organizational culture, legal systems, and peer groups, also play a role in the EDM process. However, the findings regarding these factors are mixed (Pflugrath et al., 2007; Valentine & Godkin, 2019).

Moreover, the characteristics of the ethical issue itself influence EDM. Jones (1991) introduced the concept of moral intensity (MIS), arguing that the perceived moral significance of an issue influences the EDM process. MIS consists of six dimensions: magnitude of consequences (MCQ), social consensus (SCN), probability of effect (PBE), temporal immediacy (TIM), proximity (PRX), and concentration of effect (CNE). Studies on the influence of these dimensions on EDM have also found mixed results (Johari et al., 2017; Musbah et al., 2016; Oboh, 2019; Valentine & Godkin, 2019; Valentine & Hollingworth, 2012).

In the Ethiopian context, Jones and Kinfu (1971) and Kinfu (1990) noted significant progress in accounting practices following the 1960 enactment of the Commercial Code, which laid the foundation for financial reporting and auditing. Early challenges, such as the lack of standardized principles and a shortage of qualified professionals, persisted for decades (Ghartey, 1992; Jones & Kinfu, 1971; Kinfu, 1970, 1990). To address these challenges, Ethiopia established the Accounting and Auditing Board of Ethiopia (AABE) in 2014 (Regulation No.332/2014, 2015). Despite this effort, limited resources, regulatory inconsistencies, and a shortage of local experts have hindered the full implementation of reforms (Dagnew, 2020; Wagaw et al., 2019). Furthermore, the weak presence of strong national accounting associations continues to be an issue (Jones & Kinfu, 1971;Mihret & Bobe, 2014). Hence, ethical lapses among Ethiopian accountants, including issues such as tax evasion and lack of professional competency, remain largely undocumented and challenging to address. Despite ongoing efforts to strengthen the accounting profession in Ethiopia, empirical studies examining the EDM of Ethiopian accountants are limited.

Therefore, a comprehensive understanding of the EDM process requires examining individual attributes, contextual attributes, and the ethical issue's characteristics. Accordingly, this study examines the effects of individual attributes such as intrinsic religious orientation (IRO), idealism (IDA), and relativism (RLV), along with contextual attributes like social responsibility (SOR), laws/professional codes (LPC), and peer group pressure (PGP), as well as MIS, which is measured by MCQ and SCN. Based on Rest's (1986) model, individual and contextual attributes are conceptualized as exogenous constructs influencing EDM components, while MIS mediates the relationships between these constructs.

2. Statement of the problem

Menzel (2016) emphasizes that ethical competencies for professionals include understanding codes of conduct and laws, ethical reasoning, recognition of societal norms, promotion of ethical practices, and a commitment to ethical behavior. In the accounting profession, these competencies are crucial for safeguarding the public interest, as accountants' decisions can have significant societal impacts. However, evidence suggests that the current framework supporting ethical competencies in accounting may be inadequate (McPhail & Walters, 2009). Numerous corporate scandals linked to unethical practices have raised concerns about the profession's ethical standards. Many authors attribute these scandals to accounting irregularities and failures, highlighting significant gaps between the ethical competencies expected from accountants and their actual practices (Barnett & Valentine, 2004; Shafer, 2008).

Several studies have examined factors influencing EDM (Johari et al., 2017; Koufie et al., 2024). However, empirical findings remain inconsistent, possibly due to variations in methodologies, models, and study populations. Schwartz (2015) supports this view, suggesting that these inconsistencies may stem from differences in research methods, self-report biases, student sample, and measurement tools. In addition, while some studies have examined the relationship between MRC and MIT based on Rest's (1986) model (Andersch et al., 2019; Johari et al., 2017; Rottig et al., 2011; Yang & Wu, 2009), the mediating role of MJD remains underexamined.

From a methodological perspective, many studies have employed hierarchical regression to analyze EDM components (e.g., Barnett, 2001; Musbah et al., 2016; Oboh, 2019; Oboh & Omolehinwa, 2022; Valentine & Godkin, 2019). However, this method cannot simultaneously examine the relationships of multiple constructs (Hair et al., 2022). Partial least squares structural equation modeling (PLS-SEM) offers a more comprehensive exploration of complex relationships between constructs (Hair et al., 2022). Additionally, many studies rely on single indicators to measure EDM components and MIS (Latan et al., 2019; Leitsch, 2006; Musbah et al., 2016; Oboh, 2019). Hair et al. (2022) suggest that using multiple indicators for a construct improves accuracy by reducing measurement error and better capturing the construct's dimensions.

Similarly, complementing PLS-SEM with importance-performance map analysis (IPMA) and necessary condition analysis (NCA) further enhances insights. IPMA evaluates the relative importance

of constructs and their performance outcomes (Ringle & Sarstedt, 2016), while NCA identifies constructs necessary for achieving outcomes (Dul, 2016; Richter et al., 2023). Hauff et al. (2024) developed a combined importance-performance map analysis (cIPMA) framework that integrates IPMA and NCA, offering deeper insights into how antecedent constructs influence target outcomes.

3. Literature review

3.1. Theoretical literature review

Ethical dilemmas often involve conflicting values or priorities, creating challenges in determining the absolute right or wrong course of action. Ethical inquiry emphasizes the examination of such dilemmas through the lens of normative ethical theories (Brady, 1985; Hunt & Vitell, 1986). Hence, normative ethical theories form the foundation for EDM, as they provide a systematic approach to resolving ethical problems by guiding individuals toward morally sound choices. Hunt and Vitell (1986) highlighted deontology and utilitarianism as the two primary normative ethical theories for guiding ethical decisions.

Deontological ethics, often associated with Immanuel Kant, emphasizes duty and moral obligations (Brady, 1985; Hunt & Vitell, 1986). According to this theory, an action is morally right if it adheres to universally applicable moral rules or duties, regardless of its consequences. In contrast, utilitarianism prioritizes maximizing overall benefits or minimizing harm in EDM (Hunt & Vitell, 2006). It evaluates actions based on their outcomes, aiming to achieve the greatest utility for the majority. This study employs these ethical theories to examine the relationships between constructs in the EDM process.

Cognitive moral development also plays a significant role in EDM. In this regard, Kohlberg's (1973) theory explains how individuals internalize moral standards and apply moral judgment when faced with ethical challenges. Rest (1986), however, argued that Kohlberg's theory did not fully capture morality, leading him to develop a four-component EDM model, which includes moral recognition (MRC), moral judgment (MJD), moral intent (MIT), and moral behavior (MBH). The first component of Rest's (1986) model is MRC, which involves perceiving an ethical issue and understanding its potential impact on others. The second component, MJD, focuses on evaluating the possible actions identified during MRC within established ethical frameworks (Rest, 1986). The third component, MIT, pertains to moral motivation, where individuals decide on their intended actions by weighing competing values. The final component is MBH, which involves implementing the chosen action. According to Rest (1986), all four components must be present for ethical behavior to occur, and a failure in any component can result in unethical behavior.

3.2. Empirical literature review

3.2.1. Ethical decision-making

Several researchers have used Rest's (1986) four-component model in business ethics studies (Escadas et al., 2023; Kportorgbi et al., 2023; Latan et al., 2019; Moores et al., 2018; Valentine & Godkin, 2019). These studies have contributed to enriching the understanding of how each

component influences ethical behavior. However, due to practical challenges and biases in measuring actual behavior (Oboh, 2019), few empirical studies have specifically examined the actual ethical behavior (e.g., Escadas et al., 2023; Johari et al., 2017).

The existing understanding of the EDM process mainly emphasizes the relationships between its components. However, only a few studies, such as those by Escadas et al. (2023) and Latan et al. (2019), have examined the nature of these relationships beyond simply determining their direction and strength. Despite their limited number, these studies have effectively demonstrated the usefulness of these procedures in EDM research. Advanced PLS-SEM techniques, like IPMA and NCA, enhance PLS-SEM results by providing a more detailed and comprehensive analysis. IPMA compares the total effects of the importance of antecedent constructs in predicting a specific endogenous construct with the average latent variable scores representing the performance of these antecedent constructs (Ringle & Sarstedt, 2016). Meanwhile, NCA helps identify necessary factors related to an endogenous construct (Dul, 2016; Richter et al., 2023). Building on these approaches, Hauff et al. (2024) introduced the cIPMA framework, offering a more in-depth understanding of the relationships between constructs.

To examine Rest's (1986) model through the framework of cIPMA, this study conceptualized that each stage in the EDM process serves as both an important and necessary condition for the outcome of the subsequent stage. This approach is consistent with Rest's proposition, which suggests that the preceding component plays a crucial role in predicting the subsequent component in the EDM process.

3.2.2. Intrinsic religious orientation

Religious orientation significantly shapes individuals' moral foundations, influencing their actions and behavior. Dunn and Sainty (2019) highlight religious orientation as a key factor in their EDM model for professional accountants. According to Dunn and Sainty (2019), religious orientation is categorized into three types. Intrinsic individuals fully integrate their faith into their lives, whereas extrinsic individuals may treat religion more superficially, often for personal gain. Quest-oriented individuals, on the other hand, explore various religious traditions to seek deeper understanding and meaning. Several studies have examined the effects of religion on EDM (Shariff, 2015; Tariq et al., 2019; Vitell et al., 2009).

3.2.3. Moral philosophy

Forsyth (1992) argues that our moral compass, including beliefs, attitudes, and values, is rooted in our moral philosophy. Among the various personal moral codes, RLV and IDA are key frameworks for assessing these philosophies. Highly relativist individuals adopt a flexible moral view, evaluating situations based on context and sometimes overriding established ethical standards. In contrast, IDA emphasizes concern for others' well-being, with highly idealistic individuals believing that harm should always be avoided (Forsyth, 1980). A growing body of research examined the influence of IDA and RLV on EDM. The studies consistently found that

individuals with an IDA orientation exhibit stronger EDM process compared to those in RLV (Johari et al., 2017; Oboh, 2019; Vedava, 2011).

3.2.4. Ethical climate

Victor and Cullen (1987) developed the theoretical typology of ethical climate by considering three ethical theories: egoism, utilitarianism, and deontology. The typology considered the locus of analysis: individualistic, organizational, and cosmopolitan (Cullen et al., 1993; Victor & Cullen, 1987, 1988). Building on these interactions, the authors formulated nine ethical climate types: self-interest, company profit, efficiency, friendship, team interest, social responsibility, personal morality, rules and procedures, and laws/professional codes. In the accounting profession, the ethical climate types of SOR and LPC are of particular interest because they are closely related to the concept of public interest (Liu, 2020; Musbah et al., 2016; Shafer, 2008). SOR extends the ethical scope and urges accountants to consider the influence of their actions on society. Similarly, LPC is vital in guiding professional accountants' ethical behavior and shaping the EDM (Shafer, 2008).

3.2.5. Peer group pressure

Ethical behavior is cultivated through interpersonal interactions. In this regard, O'Fallon and Butterfield (2012) suggest that moral development can be influenced by PGP, which often promotes conformity to group norms. This conformity has the potential to shape the EDM process. According to Yu et al. (2021), an individual's peer group's normative support for ethical behavior increases the likelihood of influencing EDM. Prior empirical studies suggested that PGP significantly influences the EDM (Flynn & Wiltermuth, 2010; O'Fallon & Butterfield, 2012).

3.2.6. Moral intensity

Jones (1991) introduced the concept of MIS with six dimensions to predict the EDM process. Each dimension shapes individuals' ethical perceptions of a situation and influences their EDM. However, the extant literature found consistent and significant results for the dimensions of MCQ and SCN (Arnold et al., 2013; Musbah et al., 2016; Oboh, 2019; Valentine & Godkin, 2019). These results suggest that accountants will likely consider a more thorough analysis in situations with high MCQ and SCN to ensure ethically sound decisions.

Several empirical studies have examined the mediating role of MIS in the EDM process. Johari et al. (2017) examined MIS in the context of auditors and found that it partially mediates the relationship between auditors' ethical orientations and self-interest with MRC. Similarly, Arnold et al. (2013) studied the mediation effects of MCQ and SCN in the relationship between MJD and MIT. Their findings indicate that both dimensions serve as mediators in the auditors' EDM process.

4. Research gap

The existing literature on EDM found mixed results in terms of EDM components and the factors. Schwartz (2015) argues the inconsistencies stem from methodological aspects, including models used, study units examined, research methodologies used, reliance on self-reported data, and variations in measurement quality. First, the primary focus of the studies using Rest's (1986) four-

component model was on the direct relationships between the components. The potential effect of MJD as a mediating remains largely underexamined. Furthermore, understanding how MIS mediates the relationships between individual and contextual factors and the components of EDM enhances the comprehension of the EDM process.

Second, several studies rely on one indicator to measure each component of Rest's model (e.g., Musbah et al., 2016; Oboh, 2019). As Moores et al. (2018) suggested, using multiple measures more effectively explains the components' variance. Third, frequent reliance on student samples raises concerns about generalizability (e.g., Pflugrath et al., 2007; Valentine & Bateman, 2011). While students offer convenience, their experiences might not fully translate to the complexities of professional settings. Broadening the research scope of professionals can ensure the findings are more relevant to real-world cases. Third, several studies analyze EDM components through hierarchical regression (e.g., Barnett, 2001; Barnett & Valentine, 2004; Musbah et al., 2016; Valentine & Godkin, 2019), while SEM allows for more simultaneous analysis, revealing how all the components interact with the other factors (Hair et al., 2022). This is also further substantiated with the insights of cIPMA. Finally, there is a notable absence of empirical studies addressing the EDM of authorized accountants in Ethiopia. Therefore, it is crucial to examine these issues within the Ethiopian context.

Figure 1 shows the total number of literature sources reviewed in the study, totaling 286. Of these, 272 were foreign sources, consisting of 235 articles, 21 books, 13 theses, and 3 code, regulation and reports. In contrast, only 14 Ethiopian sources were reviewed (8 articles, 1 book, 1 thesis, and 4 codes, regulations and reports). This indicates that local contributions to EDM literature are relatively limited.

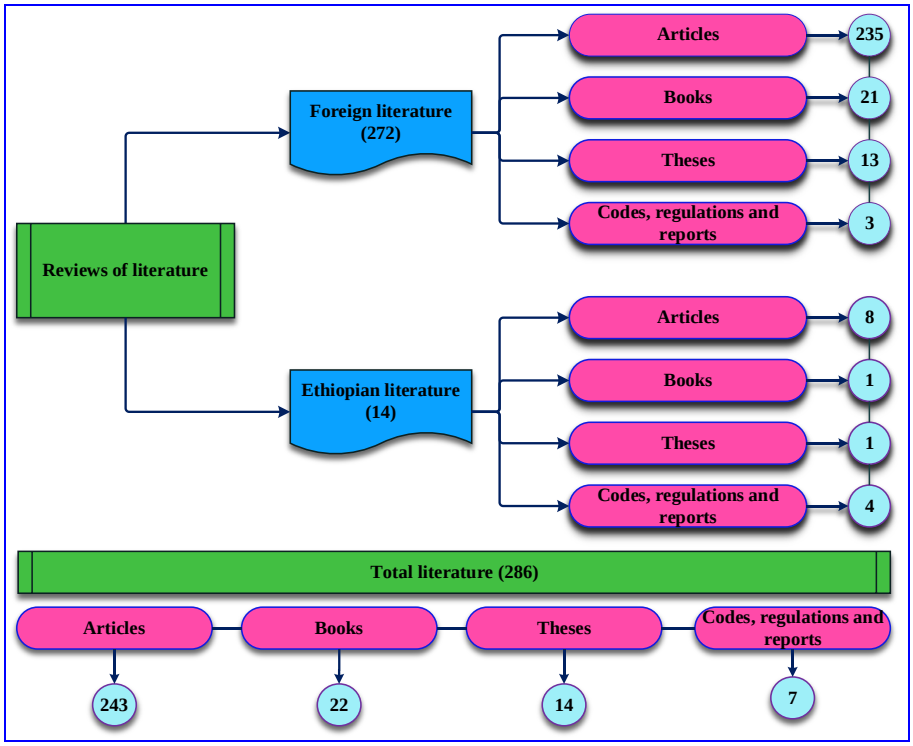

Figure 1: Distribution of foreign and Ethiopian literature reviewed in the study

5. Conceptual framework

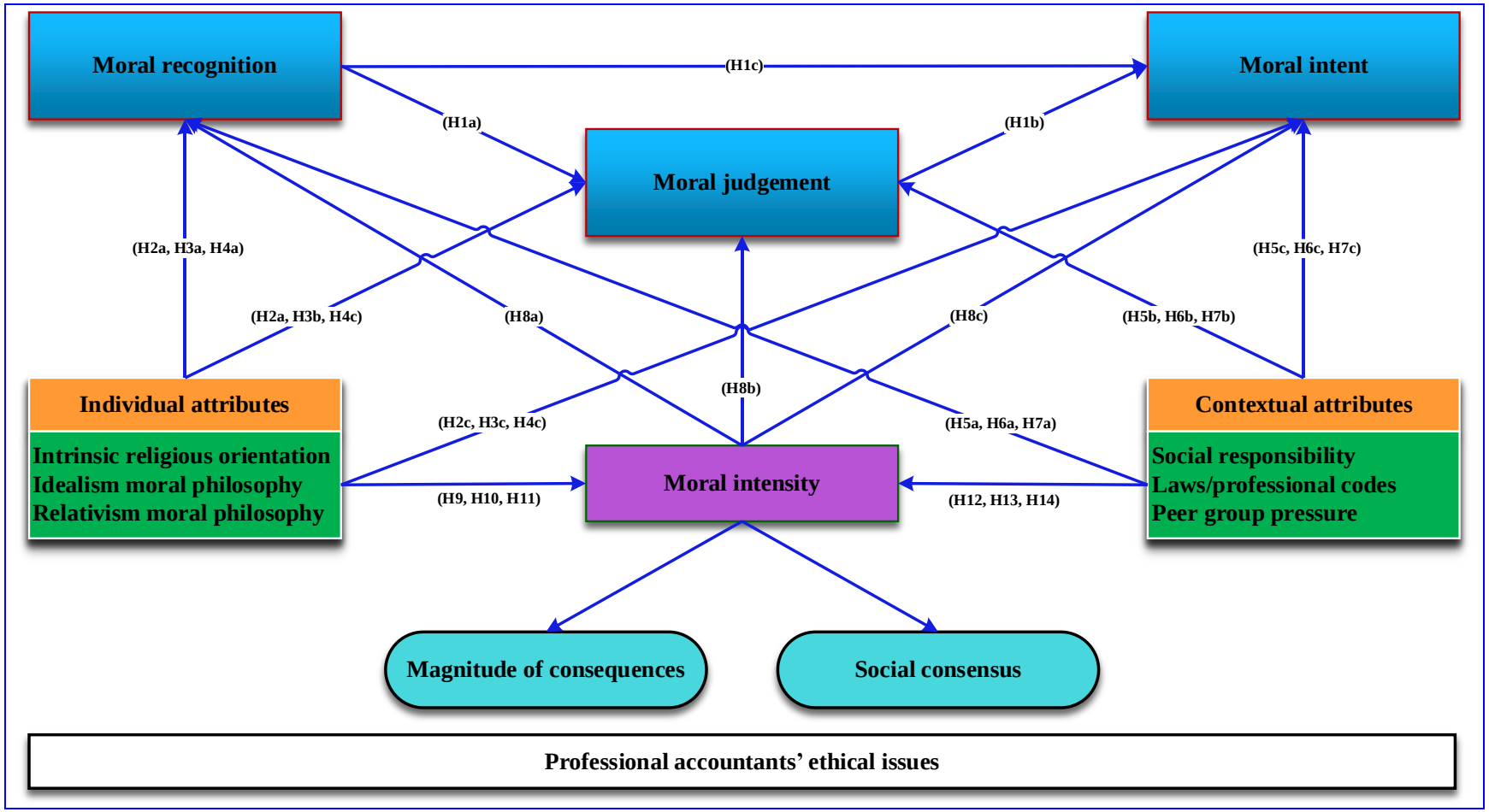

Figure 2: Conceptual framework

Note: Hypothesis (H1d) pass through moral judgment; hypotheses (H15-H20) pass through moral intensity; magnitude of consequences and social responsibilities are indicators for the higher-order construct moral intensity.

6. Research questions

1. What is the relationship between the components of ethical decision-making?
2. Does moral judgment mediate the relationship between moral recognition and moral intent?
3. Do individual attributes have effect on the components of ethical decision-making?
4. Do contextual attributes have effect on the components of ethical decision-making?
5. Does moral intensity mediate the relationship between individual attributes and the components of ethical decision-making?
6. Does moral intensity mediate the relationship between contextual attributes and the components of ethical decision-making?
7. Are moral recognition and moral judgment necessary conditions for moral intent?
8. Are individual attributes, contextual attributes, and moral intensity necessary conditions for moral intent?

7. Objective of the study

The broad objective of this study is to examine the effects of individual attributes, contextual attributes, and moral intensity on the EDM of authorized accountants in Ethiopia. The following are the specific objectives of the study:

1. To know the relationship between the components of the ethical decision-making.
2. To examine the mediating role of moral judgment in the relationships between moral recognition and moral intent.
3. To identify the relationship between individual attributes and the components of ethical decision-making.
4. To identify the relationship between contextual attributes and the components of ethical decision-making.
5. To examine the mediating role of moral intensity in the relationships between individual attributes and the components of the ethical decision-making process.
6. To examine the mediating role of moral intensity in the relationships between contextual attributes and the components of the ethical decision-making process.
7. To explore whether moral recognition and moral judgment are necessary conditions for moral intent.
8. To explore whether individual attributes, contextual attributes and moral intensity are necessary conditions for moral intent.

8. Research hypotheses

Although the extant literature based on Rest's (1986) model has provided valuable insights into how EDM shapes ethical behavior, inconsistencies exist. For instance, some studies did not find a significant relationship between MRC and MJD (e.g., Barnett, 2001; Latan et al., 2019; Moores et al., 2018). Additionally, several studies have applied Rest's (1986) model inconsistently, often studying the components of EDM separately, which reduced the relationships within the model (e.g., Kportorgbi et al., 2023; Oboh, 2019). Furthermore, with a few exceptions (e.g., Andersch et

al., 2019; Yang & Wu, 2009) the literature has largely not examined the mediating role of MJD in the relationship between MRC and MIT.

Individual attributes influence the ethical behavior of individuals to respond to ethical issues (Dunn & Sainty, 2019; McPhail & Walters, 2009; Schwartz, 2015). The factors that pertain to a given individual's attribute include age, gender, education level, religion, work experience, moral philosophies, and nationality. This study focuses on religious orientation and moral philosophies—deeper aspects of an individual's character that have shown promise in explaining EDM. On the other hand, contextual attributes are conceptualized to include the ethical climate and peer group pressure. Building on the established direct relationships between the components of ethical decision-making and the direct effects of individual attributes and contextual attributes on the ethical decision-making process and moral intensity the following hypotheses proposed:

H1. There is a significantly positive relationship between the components of ethical decision-making.

H2. Intrinsic religious orientation has a significant positive effect on the components of ethical decision-making.

H3. Idealism has a significant positive effect on the components of ethical decision-making.

H4. Relativism has a significant negative effect on the components of ethical decision-making.

H5. Social responsibility has a significant positive effect on the components of ethical decision-making.

H6. Laws/professional codes has a significant positive effect on the components of ethical decision-making.

H7. Peer group pressure has a significantly positive effect on the components of ethical decision-making.

H8. Moral intensity has a significant positive effect on the components of ethical decision-making.

H9. Intrinsic religious orientation has a significant positive effect on moral intensity.

H10. Idealism has a significant positive effect on moral intensity.

H11. Relativism has a significant negative effect on moral intensity.

H12. Social responsibility has a significant positive effect on moral intensity.

H13. Laws/professional codes has a significant positive effect on moral intensity.

H14. Peer group pressure has a significant positive effect on moral intensity.

In addition, for the mediating role of MJD in the relationship between MRC and MIT and the mediating role of MIS in the relationships between individual attributes and contextual attributes with the ethical decision-making process, the following hypotheses proposed:

H1d. Moral judgment mediates the relationship between moral recognition and moral intent.

H15. Moral intensity mediates the relationship between intrinsic religious orientation and the components of ethical decision-making.

H16. Moral intensity mediates the relationship between idealism and the components of ethical decision-making.

H17. Moral intensity mediates the relationship between relativism and the components of ethical decision-making.

H18. Moral intensity mediates the relationship between social responsibility and the components of ethical decision-making.

H19. Moral intensity mediates the relationship between laws/professional codes and the components of ethical decision-making.

H20. Moral intensity mediates the relationship between peer group pressure and the components of ethical decision-making.

Moreover, from the cIPMA perspective, these propositions are conceptualized that MRC, MJD, IRO, IDA, SOR, LPC, PGP, and MIS are both important and necessary conditions for the outcomes at each stage of the EDM process. The cIPMA framework provides insights into the effects of MRC, MJD, IRO, IDA, SOR, LPC, PGP, and MIS on the final stage outcome construct of MIT. However, given the expected detrimental effect of RLV in the EDM process, considering it based on the logic of cIPMA does not effectively capture the essence of importance and necessary condition in the relationship. Thus, RLV is not considered in the cIPMA analysis. Therefore, based on the path relationships of the constructs and the cIPMA perspective, the following hypotheses developed:

H1e. Moral recognition is a necessary condition for moral intent.

H1f. Moral judgment is a necessary condition for moral intent

H2d. Intrinsic religious orientation is a necessary condition for moral intent.

H3d. Idealism is a necessary condition for moral intent.

H5d. Social responsibility is a necessary condition for moral intent.

H6d. Laws/professional codes is a necessary condition for moral intent.

H7d. Peer group pressure is a necessary condition for moral intent.

H8d. Moral intensity is a necessary condition for moral intent.

9. Research methodology

A post-positivist paradigm, grounded in an objective ontological perspective, is appropriate for this inquiry. Post-positivism acknowledges that while absolute truths in social sciences are unattainable, rigorous empirical investigation can yield reliable and meaningful insights. Accordingly, a quantitative research approach, using an explanatory research design, was adopted to examine the causal relationships between individual attributes, contextual attributes, and moral intensity in relation to EDM. Hence, the study followed a deductive approach, consistent with its explanatory goals and post-positivist paradigm.

9.1. Survey design

The cross-sectional survey design, chosen for its efficiency and alignment with the post-positivist paradigm, was employed in the study to collect quantitative data from a large sample. Ethiopia comprises 12 regions and 2 metropolitan city administrations. Although the AABE database listed 1,080 nationally certified accountants, accessing additional data from regional audit bureaus was difficult because of unpublished records, logistical problems, inconsistent data management, and reluctance to share information stemming from conflicts of interest. However, through direct communication with members of accounting associations, an additional 675 accountants were identified, bringing the total estimated population to 1,755 (see Table 1).

Three regions (Amhara, Oromia, and Sidama) and two metropolitan city administrations (Addis Ababa and Dire Dawa) were purposefully selected due to their high commercial activity and larger concentration of authorized accountants. Following Bentler and Chou's (1987) 5:1 respondent-to-indicator ratio, a sample size of 415 was determined based on 83 survey indicators, including demographic factors. As shown in Table 2, the number of respondents from each location was proportionally selected. The study used convenience sampling to select authorized accountants due to the dispersed nature of the population.

Table 1: Distribution of authorized accountants in Ethiopia

Name	AABE*	Regional**	Total***
Addis Ababa (MCA)	776	0	776
Afar Region	0	14	14
Amhara Region	148	130	278
Benishangul-Gumuz Region	5	11	16
Central Ethiopia Regional State^{+}	0	0	0
Dire Dawa (MCA)	10	58	68
Gambela Region^{++}	0	0	0
Harari Region	4	11	15
Oromia Region	54	246	300
Sidama Region^{+}	45	83	128
Somali Region	2	35	37
South Ethiopia Regional State^{+}	31	31	62
Southwest Ethiopia People's Region^{+}	3	0	3
Tigray Region	2	56	58
Total	1,080	675	1,755

Note: *Authorized accountants under AABE; **authorized accountants under regional audit bureaus; ***the numbers are as of September 6, 2022; $^{+}$ recently established region; $^{++}$data could not be acquired due to reporting and logistical challenges; MCA: metropolitan city administration.

Table 2: Sample distribution

Name	Population size	Sample size
Addis Ababa (MCA)	776	208
Amhara Region	278	75
Dire Dawa (MCA)	68	18
Oromia Region	300	80
Sidama Region	128	34

Note: MCA: metropolitan city administration.

9.2. Survey instrument and measurement of variables

This study used a structured, closed-ended questionnaire to collect data from respondents. The self-administered questionnaire was personally distributed, allowing for direct interaction, which improved response rates and enabled clarification of any questions. To ensure accurate responses, the questionnaire was translated into Amharic with the help of language teachers. Using familiar names in the vignettes further connected respondents to the survey contents.

9.2.1. Ethical issue vignettes

In business ethics studies, the inability to directly observe real subjects engaging in ethical or unethical behaviors leads to the use of vignettes (Flory et al., 1992). In accounting ethics research, several studies used the vignettes developed by Flory et al. (1992) (e.g., Johari et al., 2017; Leitsch, 2006; Oboh, 2019). These studies have also asserted that vignettes have a prominent level of predictive validity, content validity, and internal consistency. Accordingly, three vignettes were used in this study to measure MRC, MJD, MIT, and MIS. The vignettes involve ethical dilemmas of overlooking questionable expense reports, manipulating financial statements, and overriding company policy.

9.2.2. Ethical decision-making components

In the extant literature, most studies used a single item to measure the components of EDM (Leitsch, 2006; Musbah et al., 2016; Oboh, 2019). To benefit from the multiple indicators, this study used the tool developed by Moores et al. (2018) to measure MRC, MJD, and MIT (see Table 3). For each component, five reflective indicators measured based on 5-point Likert scale were included after each vignette.

9.2.3. Moral philosophy

The Ethics Position Questionnaire (EPQ), developed by Forsyth (1980), is a widely recognized tool for assessing individual moral philosophies, particularly IDA and RLV, in business ethics. The EPQ has strong psychometric properties, with Forsyth demonstrating its internal consistency and reliability. This study employed the EPQ to assess accountants' moral philosophies on IDA and RLV (see Table 3). While Forsyth originally used a 9-point Likert scale, this study opted for a 5-point Likert scale to improve respondents' comprehension and align with other questionnaire items.

9.2.4. Ethical climate

The Ethical Climate Questionnaire (ECQ), developed by Victor and Cullen (1987), is a widely used tool for assessing ethical climate and its influence on organizational outcomes (Buchan, 2005; Musbah et al., 2016; Shafer, 2015). In this study, the ECQ was tailored to reflect the specific context of Ethiopian authorized accountants. Ethical climate dimensions such as SOR and LPC, as outlined by Cullen et al. (1993), were included in the questionnaire (see Table 3). Although the ECQ originally measured organizational perceptions, it was adapted for this study to assess individual-level perceptions. Additionally, the study used a 5-point Likert scale to improve comprehension and align with other questionnaire items.

9.2.5. Intrinsic religious orientation

Indicators to measure IRO were derived from the studies conducted by Shariff (2015), Sulaiman et al. (2022), and Tariq et al. (2019). These studies provide a comprehensive foundation, ensuring that the indicators used are reliable and valid across diverse contexts. By synthesizing these insights, the selected indicators for measuring IRO were carefully crafted to reflect the breadth and depth of the IRO construct (see Table 3). Therefore, five reflective items were incorporated to measure this construct based on a 5-point Likert scale.

9.2.6. Peer group pressure

To comprehensively measure the influence of PGP on EDM, this study incorporates a multi-item measure derived from the foundational works of Hull (1999) and Yu et al. (2021) (see Table 3). Five reflective items were carefully designed to capture the essence of PGP's influence on EDM based on a 5-point Likert scale. These items reflect the multifaceted nature of PGP, ensuring that the construct is measured comprehensively.

9.2.7. Moral intensity

MIS is a higher-order construct composed of two dimensions. MCQ and SCN were measured using three reflective indicators adapted from Leitsch (2004), McMahon and Harvey (2006), and Watley and May (2004), with a 5-point Likert scale. These indicators were selected to capture key aspects of the ethical dilemmas in the vignettes and align with previous research (e.g., Moores et al., 2018; Oboh, 2019; Rasheed et al., 2023; Valentine & Godkin, 2019).

Table 3: Construct measurements and operationalizations

Constructs	Indicators	Sources
Endogenous construct		
Moral recognition*	Whether or not, the case raised an ethical issue for the agent.	Moores et al. (2018)
	The agent faced with a moral dilemma.	
	Agent's action involved a moral problem.	
	Agent's decision has nothing to do with ethics. (RC)	
	Agent's decision is money, not morality.	
Moral judgment*	I would consider agent's action in this case to be unacceptable.	Moores et al. (2018)
	I would consider agent's action in this case to be ethical. (RC)	
	I would consider the agent's action in this case to be good. (RC)	

	I would consider the agent's action in this case to be wise. (RC)	
	I would consider agent's action in this case to be unjust.	
Moral intent*	I would never respond the way the agent did.	Moores et al. (2018)
	I would not respond to the case if I felt facing problem. (RC)	
	I would not be silent about the case.	
	Given the opportunity, I would not respond to the case. (RC)	
	In this situation, I would do the same thing as the agent. (RC)	
Exogenous and mediator construct		
Idealism	All 10 items adopted.	Forsyth (1980)
Relativism	All 10 items adopted.	Forsyth (1980)
Social responsibility	All 4 items adopted	Cullen et al. (1993); Victor and Cullen (1987)
Laws/professional codes	All 4 items adopted	Cullen et al. (1993); Victor and Cullen (1987)
Intrinsic religious orientation	I regularly practice my religion.	Shariff (2015); Sulaiman et al. (2022); Tariq et al. (2019)
	My religion involves in all my life.	
	When I face ethical issues, I consider the issue of whether it is permissible or not according to my religion.	
	I feel a strong relationship with other people.	
	I live all aspects of my life according to my religious beliefs.	
Peer group pressure	My peers talk about the importance of ethics and doing the right thing in our work.	Hull (1999); Yu et al. (2021)
	My peers support me in following standards of ethical behavior.	
	I get advice from my peers when I face ethical dilemmas.	
	My peers carefully consider ethical issues when making work-related decisions.	
	If I am unsure about how to deal with a situation at work, the opinions of my peers act as a guide.	
Magnitude of consequences	The negative consequences of the decision will be serious.	Leitsch (2004); McMahon and Harvey (2006); Watley and May (2004)
	The overall harm because of the decision will be very small. (RC)	
	If the decision maker did nothing, the potential consequences could be serious.	
Social consensus	People are not likely to agree about whether the decision was right or wrong. (RC)	Leitsch (2004); McMahon and Harvey (2006); Watley and May (2004)
	Most people would agree that the decision is wrong.	
	Most people would agree that the decision may have prevented significant harm. (RC)	

Note: *according to the ethical issues presented in the vignettes' modified indicators were used in the other vignettes; RC: reverse coded.

9.3. Pilot studies

Two pilot studies were conducted involving 24 private accountants and 16 university accounting teachers, totaling 40 respondents. These respondents were selected using a convenience sampling method. Most constructs demonstrated acceptable internal consistency, with alpha values consistently exceeding this threshold value of above 0.750 (see Table 4).

Table 4: Pilot test results

Constructs	Vignette 1		Vignette 2		Vignette 3	
	Cronbach's alpha Pilot 1	Cronbach's alpha Pilot 2	Cronbach's alpha Pilot 1	Cronbach's alpha Pilot 2	Cronbach's alpha Pilot 1	Cronbach's alpha Pilot 2
MRC	0.896	0.823	0.802	0.813	0.710	0.798
MJD	0.882	0.889	0.856	0.902	0.777	0.797
MIT	0.848	0.856	0.824	0.828	0.807	0.818
IRO	0.853	0.892	0.853	0.892	0.853	0.892
PGP	0.835	0.883	0.835	0.883	0.835	0.883
IDA	0.797	0.827	0.797	0.827	0.797	0.827
RLV	0.819	0.755	0.819	0.755	0.819	0.755
SOR	0.779	0.841	0.779	0.841	0.779	0.841
LPC	0.818	0.880	0.818	0.880	0.818	0.880
MCQ	0.691	0.765	0.621	0.865	0.636	0.706
SCN	0.845	0.796	0.801	0.826	0.768	0.722

9.4. Survey administration

The survey was administered to authorized accountants through in-person distribution over a four-month data collection period, from mid-September 2022 to the end of January 2023. Of the 415 distributed questionnaires, 356 were successfully returned, yielding an initial response rate of 85.78% and a nonresponse rate of 14.22% (see Table 5). After excluding 24 questionnaires with significant missing values and a further 23 during data cleaning, the final dataset consisted of 309 usable responses. This exceeded the minimum sample size of 155 required for structural equation modeling (SEM), as determined by a power analysis with path coefficients ranging from 0.110 to 0.200 at a 0.005 significance level (Hair et al., 2022). The response rate also met Adam's (2020) recommended sample size of 306–323 for a population of 1,500–2,000, with a confidence interval of 0.95.

Table 5: Response rate

Survey administration	Frequency	Percent (%)
Returned questionnaires (initially distributed = 415)	356	85.78
Not returned questionnaires	59	14.22
Incomplete questionnaires	24	5.78
Before data cleaning	332	80.00
After data cleaning	309	74.46

9.5. Social desirability and common method biases

To mitigate social desirability and common method biases in the questionnaire design, strategies proposed by Podsakoff et al. (2012) were implemented. The cover page assured respondents of confidentiality, anonymity, and that the data would be used exclusively for academic purposes, encouraging honest responses. Additionally, the questionnaire was divided into distinct sections to obscure the relationships between variables, reducing the likelihood of biased answers.

To assess potential common method bias, Harman's single-factor test was conducted. As presented in Table 6, the results indicated that a single-factor solution explained less than 50% of the total

variance, suggesting minimal common method bias in the data. These findings collectively suggest that common method bias was not a significant concern in this study.

Table 6: Harman's single-factor test results

Analysis group	Variance explained (%)	Threshold (%)
Indicators related to Vignette 1	36.608	<50
Indicators related to Vignette 2	34.272	<50
Indicators related to Vignette 3	33.851	<50
All Indicators	40.208	<50

9.6. Data analysis

The data analysis used PLS-SEM, employing SmartPLS 4 software (Ringle et al., 2024). PLS-SEM is a widely recognized variance-based structural equation modeling method (Hair et al., 2022). Thus, PLS-SEM is a suitable statistical tool for this study. First, it handles relatively complex path models. This is especially advantageous given the simultaneous analysis of the MIS mediating role's relationships. Second, it enhances statistical power to improve the model by optimizing the estimation procedure between the model and the data. Third, it allows latent variable scores to be used to represent the higher-order construct. Fourth, it is particularly relevant for examining the relationships between constructs within the cIPMA methodology. Hence, to create the cIPMA chart, Microsoft Excel 365 was used.

10. Scope of the study

This study aims to examine the effects of individual attributes, contextual attributes, and moral intensity on the EDM of authorized accountants in Ethiopia. The focus is specifically on authorized accountants practicing in Ethiopia from mid-September 2022 through the end of January 2023. The study encompasses only those accountants actively engaged in the profession during this period, with data collected through a comprehensive survey. The research adopts a scientific approach to examine how individual attributes, contextual attributes, and perceived moral intensity influence the EDM of accountants. This academic study seeks to generate new insights and empirical evidence regarding the interplay between these factors in shaping EDM, contributing to the literature on EDM in the accounting profession in Ethiopia.

11. Chapter schemes

The thesis is organized into six chapters, each addressing distinct aspects of the study. The following is the structure of the thesis: Chapter One: Introduction, Chapter Two: Literature review, Chapter Three: Research methodology, Chapter Four: Conceptual framework, Chapter Five: Ethical decision-making of professional accountants: analysis and interpretation, Chapter Six: Findings, conclusions, and suggestions.

12. Major findings of the study

12.1. Demographic profiles of respondents

The demographic characteristics of respondents include 35 females (11.3%) and 274 males (88.7%). Most respondents (84%) were aged between 26 and 40 years. Regarding educational level, 75.1% have bachelor's degrees, while the rest have master's degrees (1 respondent has a PhD). Moreover, 77% of participants had over five years of work experience.

12.2. Descriptive statistics

Table 7 presents descriptive statistics for six exogenous constructs.

Table 7: Descriptive statistics of exogenous constructs

Construct	Mean	Std. Dev	Skewness	Kurtosis
IDA	3.747	0.757	-1.349	1.489
IRO	3.640	0.696	-1.015	1.176
LPC	3.586	0.873	-0.862	0.200
PGP	3.626	0.741	-0.708	-0.058
RLV	2.301	0.792	1.100	0.336
SOR	3.803	0.728	-1.160	1.298

Table 8 provides descriptive statistics for the mediating and endogenous constructs, reflecting respondents' reactions across different conditions.

Table 8: Descriptive statistics of endogenous and mediator constructs

	Vignette 1				Vignette 2				Vignette 3			
Construct	Mean	Std. Dev	Skewness	Kurtosis	Mean	Std. Dev	Skewness	Kurtosis	Mean	Std. Dev	Skewness	Kurtosis
MCQ	3.516	0.913	-0.972	0.160	3.735	0.946	-0.986	0.284	3.666	0.828	-0.765	-0.112
MIT	3.799	0.877	-1.292	0.873	3.846	0.892	-1.197	0.933	3.636	0.842	-1.528	1.682
MJD	3.631	0.923	-1.282	0.656	3.722	0.973	-1.144	0.295	3.672	0.835	-1.050	0.138
MRC	3.639	0.829	-1.081	0.390	3.690	0.892	-0.942	0.171	3.584	0.875	-1.050	0.563
SCN	3.540	0.893	-1.201	0.745	3.691	0.846	-1.067	0.460	3.712	0.922	-0.896	0.303

12.3. Structural equation modelling

The structural path relationships of PLS-SEM estimates are used to test the hypotheses. PLS-SEM is a nonparametric method that employs bootstrapping to determine statistical significance and uses this procedure to establish confidence intervals for parameter estimates, forming the foundation for statistical inference in PLS path modeling (Hair et al., 2022; Henseler et al., 2009).

12.3.1. Measurement model assessment

12.3.1.1. Lower-order constructs - measurement model assessment

The first step in assessing a reflective measurement model is evaluating the indicator loadings. Hair et al. (2022) recommends that loadings above 0.708 indicate satisfactory item reliability, explaining at least 50% of the underlying variance. All outer loadings across the vignettes exceeded this threshold and the outer weights are positive. The second step involves assessing internal consistency reliability using Cronbach's alpha (α), reliability coefficient (rho_a), and composite reliability (rho_c), with the recommended threshold being 0.700 or higher. As shown

in Table 9, all constructs' values in the three vignettes exceeded this threshold, indicating satisfactory internal consistency reliability.

Table 9: Internal consistency reliability

	Vignette 1			Vignette 2			Vignette 3		
Construct	**α**	**rho_a**	**rho_c**	**α**	**rho_a**	**rho_c**	**α**	**rho_a**	**rho_c**
Idealism	0.928	0.929	0.939	0.928	0.930	0.939	0.928	0.930	0.939
Intrinsic religious orientation	0.844	0.846	0.889	0.844	0.846	0.889	0.844	0.846	0.889
Laws/professional codes	0.882	0.898	0.918	0.882	0.898	0.918	0.882	0.896	0.918
Magnitude of consequences	0.872	0.877	0.921	0.883	0.884	0.928	0.834	0.836	0.901
Moral intent	0.923	0.923	0.942	0.920	0.922	0.940	0.898	0.900	0.924
Moral judgment	0.935	0.935	0.950	0.912	0.913	0.934	0.893	0.894	0.921
Moral recognition	0.920	0.920	0.940	0.914	0.916	0.935	0.910	0.910	0.933
Peer group pressure	0.844	0.847	0.895	0.844	0.848	0.895	0.844	0.846	0.895
Relativism	0.925	0.926	0.937	0.925	0.926	0.937	0.925	0.926	0.937
Social consensus	0.882	0.886	0.927	0.869	0.872	0.920	0.837	0.839	0.902
Social responsibility	0.857	0.865	0.903	0.857	0.864	0.903	0.857	0.862	0.903

The third step assessed convergent validity based on the average variance extracted (AVE). According to Hair et al. (2022), an AVE value of 0.500 or above signifies that the construct, on average, accounts for more than half of the variance in its indicators. As shown in Table 10, the AVE values for all constructs in the three vignettes exceeded the 0.500 threshold. These values indicate strong convergent validity across the constructs, meaning the measures successfully captured the underlying concepts they were intended to measure.

Table 10: Average variance extracted (AVE)

Construct	**Vignette 1**	**Vignette 2**	**Vignette 2**
Idealism	0.607	0.607	0.607
Intrinsic religious orientation	0.617	0.617	0.617
Laws/professional codes	0.737	0.737	0.738
Magnitude of consequences	0.796	0.811	0.751
Moral intent	0.764	0.758	0.710
Moral judgment	0.793	0.739	0.701
Moral recognition	0.757	0.743	0.735
Peer group pressure	0.680	0.680	0.680
Relativism	0.599	0.599	0.599
Social consensus	0.809	0.792	0.754
Social responsibility	0.699	0.699	0.699

This study assessed discriminant validity using the Fornell-Larcker criterion, the heterotrait-monotrait (HTMT) ratio, and cross-loadings, providing a quantitative evaluation of the distinctiveness between constructs. As shown in Table 11, the HTMT ratios (above the diagonal bold and italicized values) were below the threshold of 0.850 across the three vignettes. For the Fornell-Larcker criterion, the square roots of the AVE (bold and italicized diagonal values) were significantly higher than the correlations between the constructs, confirming discriminant validity. Cross-loading analysis further

confirmed that indicators loaded more strongly on their respective constructs than on others. These findings collectively establish discriminant validity for all constructs across the three vignettes.

Table 11: Fornell and Larcker criterion and the heterotrait-monotrait (HTMT) ratio

Construct*	IDA	IRO	LPC	MCQ	MIT	MJD	MRC	PGP	RLV	SCN	SOR
Vignette 1											
IDA	***0.779***	0.584	0.213	0.511	0.604	0.507	0.706	0.324	0.487	0.523	0.546
IRO	0.518	***0.785***	0.412	0.667	0.817	0.749	0.771	0.436	0.597	0.635	0.661
LPC	0.201	0.360	***0.859***	0.330	0.390	0.545	0.282	0.679	0.245	0.325	0.211
MCQ	0.462	0.577	0.299	***0.892***	0.696	0.675	0.731	0.335	0.501	0.801	0.491
MIT	0.560	0.722	0.358	0.626	***0.874***	0.779	0.824	0.326	0.591	0.672	0.580
MJD	0.473	0.666	0.501	0.612	0.724	***0.891***	0.694	0.446	0.506	0.630	0.554
MRC	0.653	0.681	0.262	0.656	0.759	0.644	***0.870***	0.252	0.677	0.739	0.601
PGP	0.289	0.370	0.588	0.290	0.289	0.398	0.224	***0.825***	0.293	0.238	0.329
RLV	-0.452	-0.529	-0.227	-0.452	-0.547	-0.471	-0.625	-0.261	***0.774***	0.520	0.426
SCN	0.475	0.551	0.293	0.703	0.607	0.573	0.667	0.211	-0.471	***0.900***	0.447
SOR	0.491	0.565	0.195	0.428	0.525	0.504	0.537	0.281	-0.383	0.393	***0.836***
Vignette 2											
IDA	***0.779***	0.584	0.213	0.457	0.533	0.461	0.710	0.324	0.487	0.529	0.546
IRO	0.518	***0.785***	0.412	0.602	0.766	0.757	0.735	0.436	0.597	0.638	0.661
LPC	0.201	0.360	***0.859***	0.272	0.321	0.589	0.259	0.679	0.245	0.286	0.211
MCQ	0.416	0.524	0.248	***0.901***	0.613	0.590	0.635	0.322	0.388	0.707	0.466
MIT	0.495	0.678	0.296	0.554	***0.870***	0.709	0.689	0.313	0.557	0.665	0.501
MJD	0.427	0.664	0.533	0.531	0.653	***0.860***	0.633	0.462	0.434	0.586	0.560
MRC	0.655	0.650	0.241	0.571	0.635	0.581	***0.862***	0.288	0.672	0.717	0.614
PGP	0.290	0.370	0.590	0.280	0.276	0.408	0.255	***0.825***	0.293	0.255	0.329
RLV	-0.452	-0.529	-0.227	-0.352	-0.517	-0.399	-0.620	-0.261	***0.774***	0.509	0.426
SCN	0.477	0.548	0.254	0.620	0.597	0.524	0.641	0.224	-0.458	***0.890***	0.428
SOR	0.490	0.565	0.195	0.409	0.453	0.500	0.547	0.281	-0.383	0.375	***0.836***
Vignette 3											
IDA	***0.779***	0.584	0.213	0.553	0.443	0.488	0.659	0.324	0.487	0.562	0.546
IRO	0.518	***0.785***	0.412	0.716	0.788	0.772	0.843	0.436	0.597	0.643	0.661
LPC	0.201	0.360	***0.859***	0.330	0.308	0.585	0.315	0.679	0.245	0.264	0.211
MCQ	0.488	0.602	0.291	***0.867***	0.591	0.647	0.681	0.398	0.518	0.733	0.441
MIT	0.408	0.688	0.279	0.513	***0.843***	0.701	0.765	0.307	0.556	0.616	0.450
MJD	0.446	0.671	0.525	0.559	0.630	***0.837***	0.687	0.495	0.464	0.577	0.538
MRC	0.608	0.740	0.288	0.595	0.692	0.621	***0.857***	0.337	0.635	0.695	0.620
PGP	0.290	0.370	0.593	0.337	0.268	0.432	0.298	***0.825***	0.293	0.275	0.329
RLV	-0.452	-0.530	-0.226	-0.457	-0.506	-0.422	-0.584	-0.261	***0.774***	0.501	0.426
SCN	0.497	0.542	0.232	0.614	0.534	0.500	0.608	0.234	-0.444	***0.869***	0.465
SOR	0.490	0.564	0.194	0.376	0.398	0.474	0.549	0.282	-0.382	0.398	***0.836***

Note: * bold and italicized diagonal values are the square roots of AVE, and underneath the diagonal values are the correlations between the constructs, representing the Fornell and Larcker criterion. Above the diagonal values are the HTMT ratio values.

12.3.1.2. Validating the higher-order construct

The latent construct scores of MCQ and SCN from stage one was used to form the higher-order construct MIS in stage two. Table 12 shows that the outer loadings of the two indicators for MIS across the three vignettes exceeded the threshold value of 0.708, indicating satisfactory indicator reliability. Additionally, the statistical values for internal consistency reliability met the recommended thresholds, confirming that MIS exhibited reliable internal consistency across the vignettes. Furthermore, Table 12 presents AVE values for MIS, all of which were above 0.500, indicating that convergent validity was also satisfied for the higher-order construct across the three vignettes.

Table 12: Higher-order construct outer loadings, reliability, and convergent validity

Vignette	Construct	Item	OL	OW	α	rho_a	rho_c	AVE
Vignette 1	MIS	MCQ1	0.924	0.547	0.826	0.826	0.920	0.852
		SCN1	0.921	0.537				
Vignette 2	MIS	MCQ2	0.893	0.536	0.766	0.768	0.895	0.810
		SCN2	0.907	0.575				
Vignette 3	MIS	MCQ3	0.901	0.565	0.761	0.762	0.893	0.807
		SCN3	0.895	0.548				

The results in Table 13 show that the HTMT value for MIS and the corresponding constructs were below the threshold of 0.850. This result corroborated that the discriminant validity for the MIS across the three vignettes, based on the HTMT ratio, was satisfied.

Table 13: Higher-order construct heterotrait-monotrait (HTMT) ratio

Vignette	Construct	IDA	IRO	LPC	MIS	MIT	MJD	MRC	PGP	RLV	SOR
Vignette 1	MIS	0.579	0.730	0.367	-	0.766	0.731	0.823	0.321	0.571	0.525
Vignette 2	MIS	0.586	0.738	0.330	-	0.760	0.700	0.804	0.342	0.533	0.532
Vignette 3	MIS	0.651	0.793	0.346	-	0.704	0.714	0.803	0.393	0.596	0.530

Moreover, based on the Fornell-Larcker criterion, the bold, italicized values in Table 14 represent the square root of the AVE for MIS. These values across the three vignettes were well above the corresponding correlation values of other constructs. Consequently, the discriminant validity of MIS across the three vignettes, as per the Fornell-Larcker criterion, was satisfied.

Table 14: Higher-order construct Fornell-Larcker criterion

Vignette	Construct	IDA	IRO	LPC	MIS	MIT	MJD	MRC	PGP	RLV	SOR
Vignette 1	MIS	0.507	0.611	0.321	***0.923***	0.669	0.643	0.717	0.271	-0.500	0.445
Vignette 2	MIS	0.497	0.595	0.278	***0.900***	0.640	0.586	0.675	0.278	-0.452	0.435
Vignette 3	MIS	0.548	0.637	0.291	***0.898***	0.583	0.590	0.669	0.318	-0.501	0.431

Finally, the discriminant validity of MIS was assessed using cross-loadings. As Table 15 shows, cross-loadings analysis confirmed that MIS indicators loaded more strongly on MIS than other constructs. This finding further supported discriminant validity. Accordingly, the discriminant validity of the higher-order construct, based on the three measures across the three vignettes, was confirmed.

Table 15: Higher-order construct cross-loadings

Vignette	Item	IDA	IRO	LPC	MIS	MIT	MJD	MRC	PGP	RLV	SOR
Vignette 1	MCQ1	0.462	0.577	0.299	***0.924***	0.626	0.612	0.656	0.290	-0.452	0.428
	SCN1	0.474	0.551	0.293	***0.921***	0.607	0.573	0.667	0.210	-0.471	0.393
Vignette 2	MCQ2	0.416	0.523	0.247	***0.893***	0.554	0.531	0.571	0.280	-0.352	0.409
	SCN2	0.477	0.548	0.254	***0.907***	0.597	0.524	0.641	0.223	-0.457	0.375
Vignette 3	MCQ3	0.488	0.602	0.290	***0.901***	0.513	0.559	0.595	0.336	-0.457	0.376
	SCN3	0.497	0.542	0.232	***0.895***	0.534	0.500	0.608	0.234	-0.443	0.398

12.3.2. Structural model

The structural model evaluation began by examining potential collinearity among constructs. According to Hair et al. (2022), VIF values of predictor constructs should be less than 5, with a preferred threshold of less than 3, to ensure collinearity does not significantly affect the model. As shown in Table 16, with the exception of two relationships (MRC → MJD and MRC → MIT), where the VIF values were below 5, all other construct relationships had VIF values consistently below 3 across the three vignettes. These results suggest that collinearity between constructs was not a significant concern in the study.

Table 16: Variance inflation factor (VIF)

Relationship	Vignette 1	Vignette 2	Vignette 3
IDA → MIS	1.576	1.574	1.574
IDA → MIT	1.898	1.892	1.800
IDA → MJD	1.898	1.889	1.800
IDA → MRC	1.652	1.649	1.699
IRO → MIS	2.007	2.008	2.008
IRO → MIT	2.526	2.536	2.931
IRO → MJD	2.385	2.305	2.738
IRO → MRC	2.224	2.230	2.308
LPC → MIS	1.597	1.601	1.609
LPC → MIT	1.812	1.886	1.832
LPC → MJD	1.636	1.609	1.615
LPC → MRC	1.633	1.609	1.613
MIS → MIT	2.370	2.109	2.188
MIS → MJD	2.241	2.016	2.110
MIS → MRC	1.863	1.730	1.972
MJD → MIT	2.621	2.558	2.477
MRC → MIT	3.628	3.250	3.143
MRC → MJD	3.538	3.182	3.079
PGP → MIS	1.643	1.647	1.655
PGP → MIT	1.703	1.661	1.666
PGP → MJD	1.702	1.661	1.664
PGP → MRC	1.650	1.647	1.657
RLV → MIS	1.487	1.486	1.488
RLV → MIT	1.725	1.723	1.621
RLV → MJD	1.725	1.715	1.621

RLV → MRC	1.551	1.514	1.537
SOR → MIS	1.611	1.609	1.608
SOR → MIT	1.680	1.707	1.663
SOR → MJD	1.646	1.661	1.642
SOR → MRC	1.621	1.618	1.608

The model fits (based on vignettes) were assessed using the standardized root mean square residual (SRMR) and the normed fit index (NFI). As Hair et al. (2022) suggest, SRMR values below 0.080 and NFI values above 0.900 are considered preferable thresholds in model fit assessment. As shown in Table 17, the SRMR values in the current study ranged from 0.043 to 0.046, while the NFI values ranged from 0.808 to 0.829. The SRMR values indicate that the models fit the data well. Although the NFI values are slightly below the threshold, they still represent a reasonably acceptable fit.

Table 17: Model fit

Metrics	Vignette 1	Vignette 2	Vignette 3
SRMR	0.043	0.046	0.045
NFI	0.829	0.808	0.816

Note: NFI: normed fit index, SRMR: standardized root mean square residual.

To evaluate the statistical significance and strength of the estimated path coefficients in the structural model, the study employed percentile bootstrapping with 10,000 resamples and a two-tailed test at a 0.05 significance level. Figures 3 to 5 show the structural model estimates based on the three vignettes. The Figures display PLS-SEM path coefficients and the endogenous constructs' explanatory power.

As outlined by Hair et al. (2022), the structural model in this study was evaluated using three key metrics: coefficient of determination (R^2), effect size (f^2), and predictive power (Q^2) across the three vignettes. R^2 measures the model's explanatory power, indicating how much variance in an endogenous construct is explained by its predictors, thus reflecting the model's fit and strength of association in the PLS path model. To assess the influence of individual predictors, the f^2 was used, where values greater than 0.020, 0.150, and 0.350 suggest a slight, moderate, or significant impact on the R^2 value if the predictor is removed. The Q^2 value measures the predictive relevance of the model, with values above 0 indicating small predictive relevance, above 0.250 indicating medium relevance, and above 0.500 indicating large predictive relevance (Hair et al., 2019, 2022; Henseler et al., 2009).

Table 18 reports the R^2 values for three endogenous constructs and one mediator across the three vignettes. MRC consistently had the highest R^2 values, with the model explaining 71.7%, 68.6%, and 67.5% of its variance in vignettes 1, 2, and 3, respectively, indicating that the predictors effectively captured MRC's variability. MIT also showed strong R^2 values, ranging from 59.2% to 70.7%, though slightly lower than MRC. MJD exhibited moderate R^2 values, with consistent results across the vignettes (59.6% to 61.9%). MIS had the lowest R^2 values, explaining between 42.2% and 49.3% of its variance. Overall, the model explained over 50% of the variance in all constructs across the vignettes.

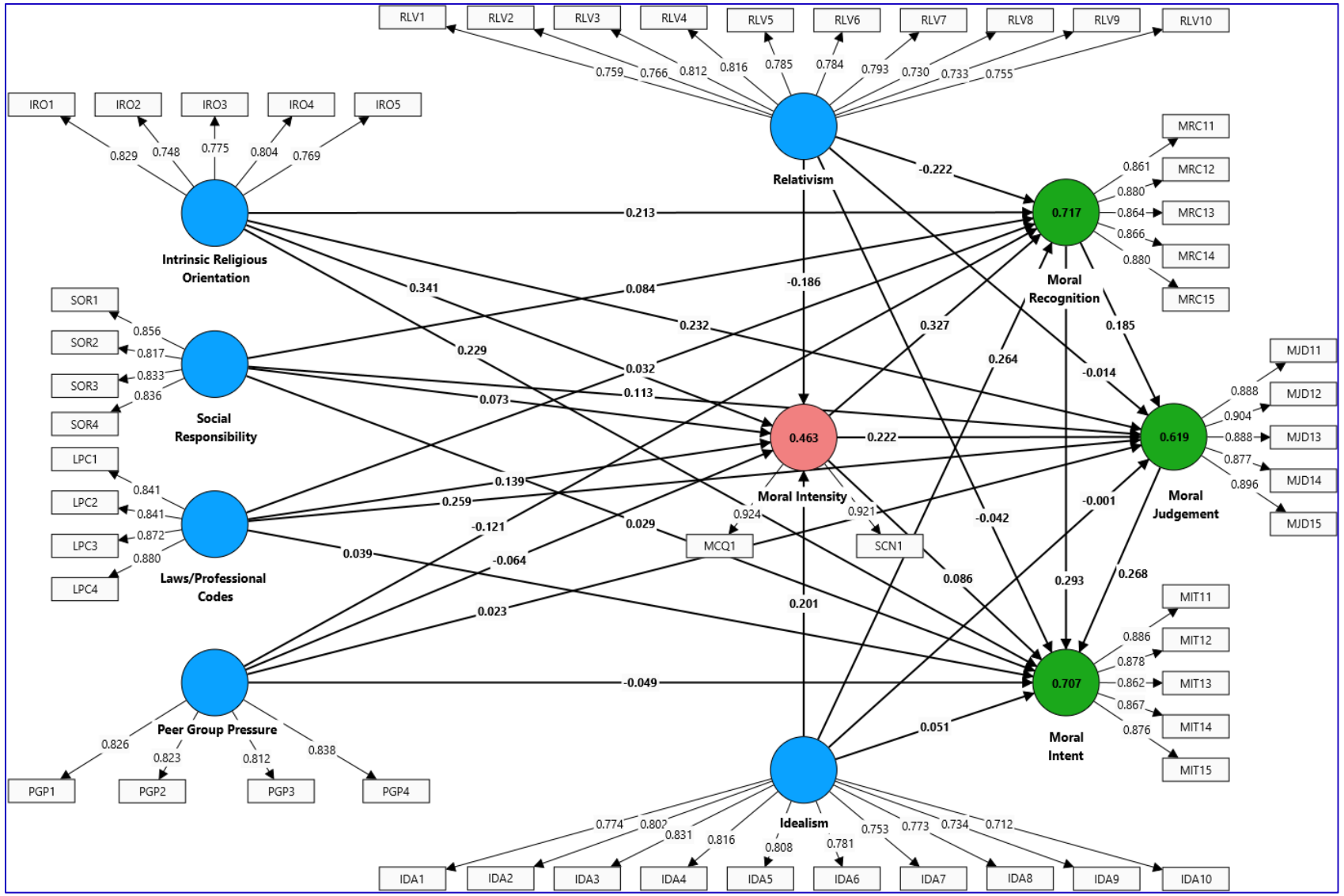

Figure 3: PLS-SEM path model for the first vignette

Note: Endogenous construct Exogenous construct Mediator construct Indicator

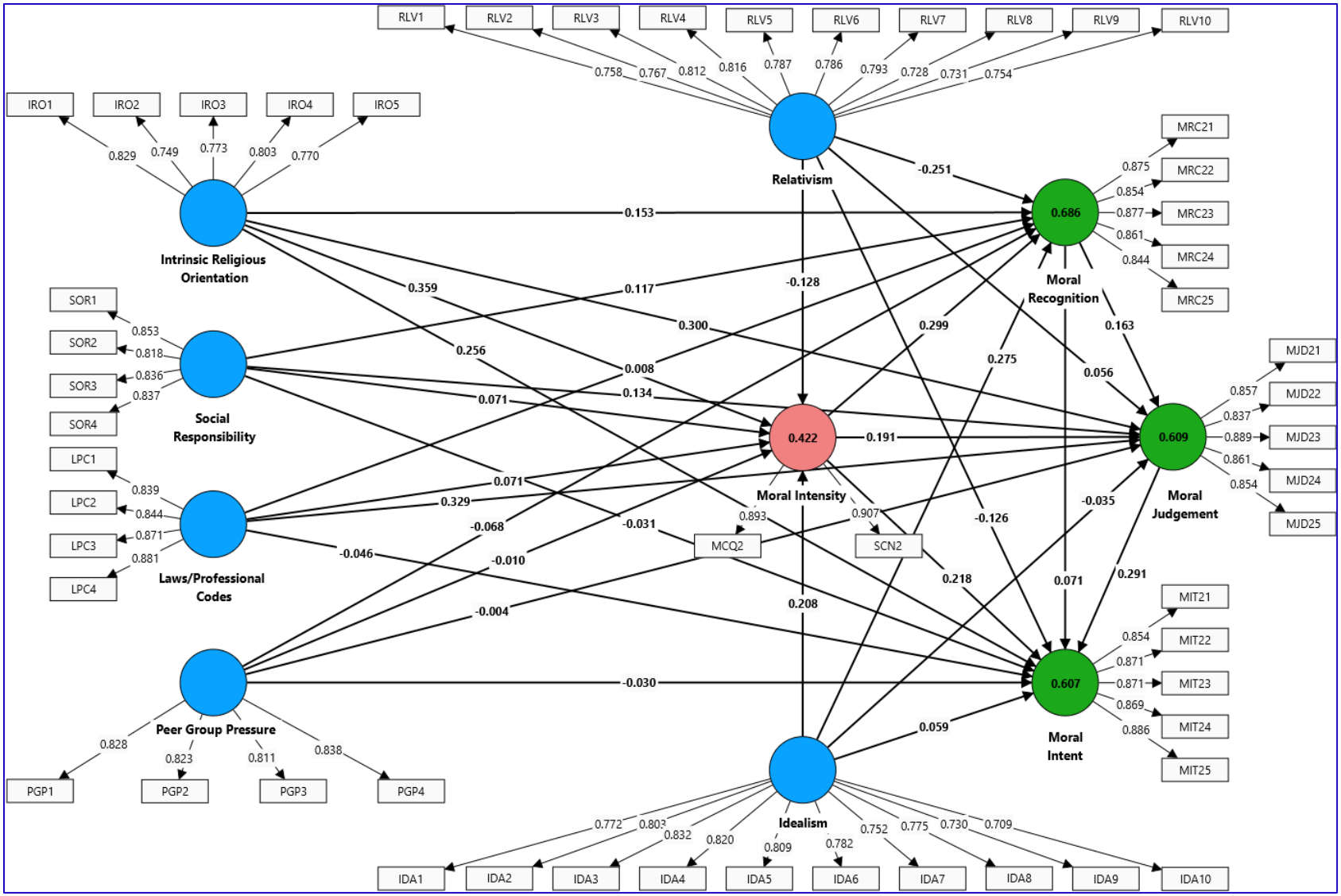

Figure 4: PLS-SEM path model for the second vignette

Note: Endogenous construct Exogenous construct Mediator construct Indicator

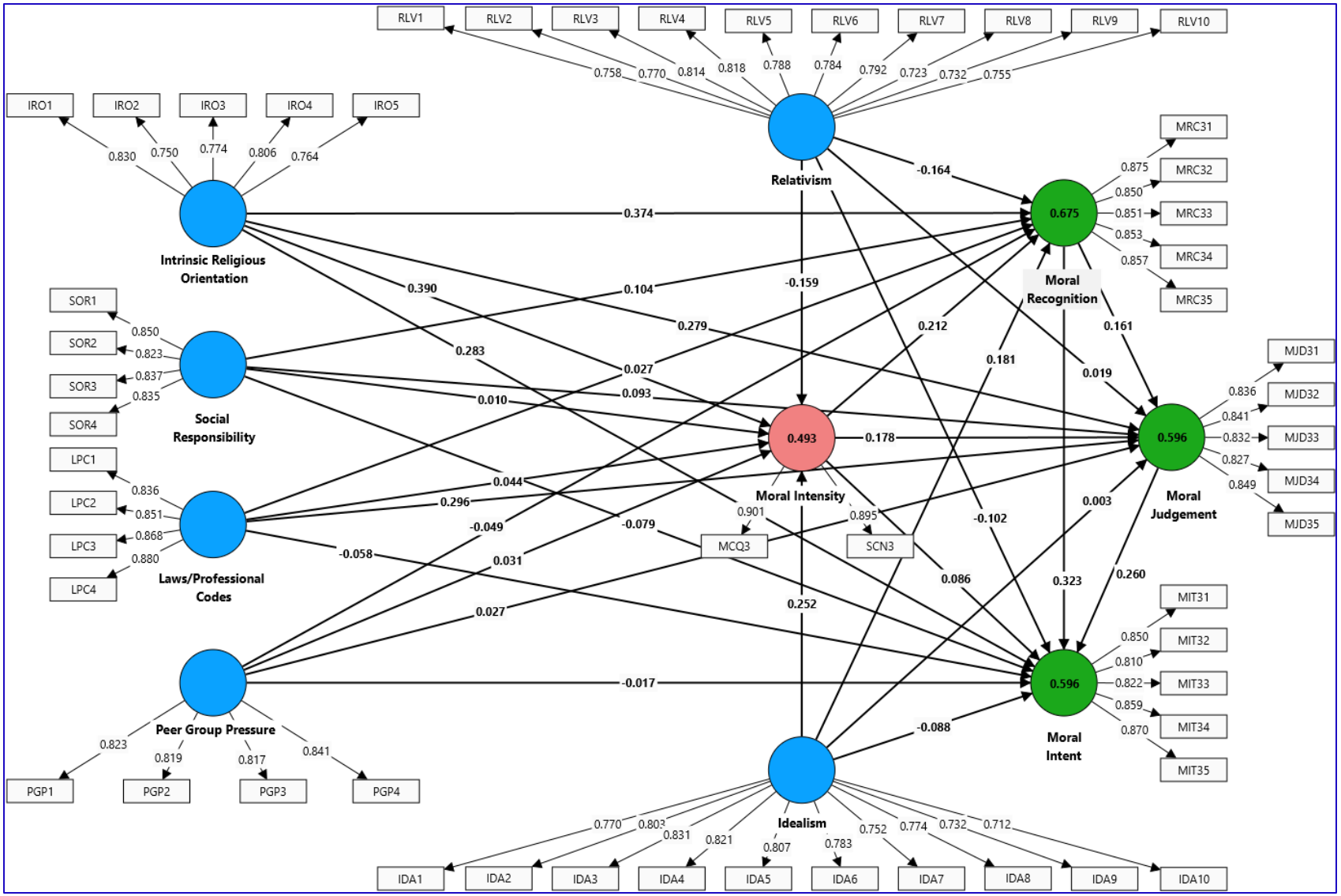

Figure 5: PLS-SEM path model for the third vignette

Note: Endogenous construct Exogenous construct Mediator construct Indicator

Table 18: Structural model results

	Vignette 1		Vignette 2		Vignette 3	
Construct	R^2	Q^2	R^2	Q^2	R^2	Q^2
MIS	0.463	0.430	0.422	0.387	0.493	0.464
MIT	0.707	0.591	0.607	0.488	0.596	0.474
MJD	0.619	0.542	0.609	0.546	0.596	0.542
MRC	0.717	0.639	0.686	0.611	0.675	0.630

Note: MIS: moral intensity, MIT: moral intent, MJD: moral judgment, MRC: moral recognition, R^2: coefficient of determination, Q^2: predictive power.

The analysis of f^2 effect sizes (see Table 19) revealed the strength of relationships between predictor constructs and endogenous constructs (MIS, MIT, MJD, MRC) across three vignettes. Medium effect sizes ($f^2 > 0.150$) indicated significant contributions from certain predictors, with IDA → MRC in vignettes 1 and 2 showing near-medium effect sizes (0.149, 0.146), highlighting IDA's substantial influence on MRC. Similarly, IRO → MIS (0.149) and IRO → MRC (0.186) in vignette 3 demonstrated medium effects, underscoring IRO's key role in predicting both MIS and MRC in that vignette. Additionally, MIS → MRC had medium effects in vignettes 1 and 2 (0.203, 0.165), indicating its significant role in explaining MRC. In contrast, other relationships exhibited small and negligible effect sizes, contributing minimally to the variance in their respective constructs.

As shown in Table 18, the model's predictive relevance was evaluated for the four constructs—MIS, MIT, MJD, and MRC—using $PLS_{predict}$ across the three vignettes. The results demonstrated that the model retained its predictive relevance for all constructs, as indicated by the Q^2 values, which are all above zero. MRC consistently showed the highest predictive relevance among the constructs across all vignettes, with Q^2 values of 0.639, 0.611, and 0.630 for vignettes 1, 2, and 3, respectively. On the other hand, MIS had relatively the lowest Q^2 predictive values overall, ranging from 0.387 to 0.464.

Table 19: Effect size (f^2)

Relationship	Vignette 1	Vignette 2	Vignette 3
IDA → MIS	0.048	0.047	0.079
IDA → MIT	0.005	0.005	0.011
IDA → MJD	0.000	0.002	0.000
IDA → MRC	0.149	0.146	0.060
IRO → MIS	0.108	0.111	0.149
IRO → MIT	0.071	0.066	0.067
IRO → MJD	0.059	0.100	0.070
IRO → MRC	0.072	0.033	0.186
LPC → MIS	0.022	0.005	0.002
LPC → MIT	0.003	0.003	0.005
LPC → MJD	0.108	0.172	0.134
LPC → MRC	0.002	0.000	0.001

MIS → MIT	0.011	0.057	0.008
MIS → MJD	0.058	0.046	0.037
MIS → MRC	0.203	0.165	0.070
MJD → MIT	0.093	0.084	0.067
MRC → MIT	0.081	0.004	0.082
MRC → MJD	0.025	0.021	0.021
PGP → MIS	0.005	0.000	0.001
PGP → MIT	0.005	0.001	0.000
PGP → MJD	0.001	0.000	0.001
PGP → MRC	0.031	0.009	0.004
RLV → MIS	0.043	0.019	0.033
RLV → MIT	0.004	0.024	0.016
RLV → MJD	0.000	0.005	0.001
RLV → MRC	0.112	0.132	0.054
SOR → MIS	0.006	0.005	0.000
SOR → MIT	0.002	0.001	0.009
SOR → MJD	0.020	0.028	0.013
SOR → MRC	0.016	0.027	0.021

12.3.3. Hypothesis testing (direct effect)

12.3.3.1. Components of ethical decision-making

According to Rest's (1986) EDM model, ethical behavior develops through four stages, each representing a distinct process. This study, therefore, focuses on the first three components of EDM. The research objectives (RO) and related hypotheses are as follows:

RO 1: To know the relationship between the components of the ethical decision-making.

H1a. There is a significantly positive relationship between moral recognition and moral judgment.

H1b. There is a significantly positive relationship between moral judgment and moral intent.

H1c. There is a significantly positive relationship between moral recognition and moral intent.

As shown in Table 20, positive and significant relationships were found among the components of EDM, except for the MRC → MIT relationship in vignette 2. This offers empirical support for Rest's (1986) model by confirming the logical sequence of the EDM process. The study emphasizes the importance of recognizing an ethical issue as the first step in the EDM process. The study by Rottig et al. (2011) observed that individuals who perceive an action as just, fair, or morally right are more likely to engage in MJD and develop an intent to act. This indicates that authorized accountants with high levels of MRC are more likely to engage in moral evaluation when faced with ethical dilemmas. However, it is important to note that some empirical studies found inconsistent results in this relationship and claimed that like emotions and MIS, mediate the relationship (e.g., Barnett, 2001; Latan et al., 2019; Moores et al., 2018). However, Rest (1986) claimed that without recognizing a moral issue in the first place, individuals cannot engage in MJD.

The study also found a positive and significant relationship between MJD and MIT. This finding corroborated that MJD is a direct antecedent of MIT. When authorized accountants make MJD while evaluating ethical dilemmas, they expect to have positive intentions to act ethically. The extant literature found consistent results and indicated that MJD predicts individuals' propensity to act (Johari et al., 2017; Latan et al., 2019). Conversely, some studies found inconsistent results in the relationship between MJD and MIT (e.g., Barnett & Valentine, 2004; Liyanapathirana & Low, 2024). The findings of this study support a direct relationship between MRC and MIT, except in vignette 2, an area often underexamined in existing literature. Johari et al. (2017) identified significant relationship between MRC and MIT, while Rottig et al. (2011) noted significant indirect effects of MRC on MIT, and Buchan (2005) found MRC positively influences the MIT of public accountants.

Table 20: Hypothesis testing for direct relationships of EDM components

	Vignette 1			Vignette 2			Vignette 3			
Hypothesis	***β***	***t* stat**	***p*-value**	***β***	***t* stat**	***p*-value**	***β***	***t* stat**	***p*-value**	**Results**
MRC → MJD	0.185	2.704	0.007	0.163	2.297	0.022	0.161	2.041	0.041	*H1a* fully supported
MJD → MIT	0.268	4.904	0.000	0.291	5.055	0.000	0.260	3.894	0.000	*H1b* fully supported
MRC → MIT	0.293	4.023	0.000	0.071	1.087	0.277	0.323	4.037	0.000	*H1c* partially supported

12.3.3.2. Individual attributes

Individual attributes play a vital role in influencing the EDM process of authorized accountants. This study specifically examined the effects of IRO, IDA, and RLV on the components of EDM among authorized accountants in Ethiopia. The study's objective and the related hypotheses concerning the relationships between these individual factors and the EDM components are presented below:

RO 3: To identify the relationship between individual attributes and the components of ethical decision-making.

- ***H2.*** Intrinsic religious orientation has a significant positive effect on (a) moral recognition, (b) moral judgment, and (c) moral intent.
- ***H3.*** Idealism has a significant positive effect on (a) moral recognition, (b) moral judgment, and (c) moral intent.
- ***H4.*** Relativism has a significant negative effect on (a) moral recognition, (b) moral judgment, and (c) moral intent.

Individuals' religious beliefs and values often guide their moral compass and influence their decisions on various ethical issues. As shown in Table 21, the empirical data gathered from authorized accountants in Ethiopia consistently supported the hypothesized relationships between IRO and the components of EDM across vignettes. Thus, the findings consistently demonstrated that IRO had a significant positive effect on all components of EDM across the vignettes.

IRO guides individuals to make decisions based on duty and moral obligation, rather than on consequences (Brady, 1985; Hunt & Vitell, 1986). Authorized accountants with a strong IRO are likely to strictly follow ethical standards, ensuring their decisions reflect a commitment to moral principles

over external rewards or outcomes. Empirical studies have consistently shown that IRO is a stable predictor of ethical behavior (Kportorgbi et al., 2022; Shariff, 2015). As shown in Table 21, the hypothesized relationships between IDA and the components of EDM varied across the vignettes. In all vignettes, the effect of IDA on MRC was positive and significant. However, the effect of IDA on MJD was not significant in any of the vignettes. Similarly, the effect of IDA on MIT was not significant. The consistent significant effect of IDA on MRC across all vignettes, coupled with the lack of significance in the IDA → MJD and IDA → MIT relationships, highlights the mixed effect of IDA across different constructs and contexts among authorized accountants in Ethiopia.

Table 21 presents the findings related to the hypothesized relationships between RLV and the components of EDM across the three vignettes. The results revealed varying levels of support for these relationships. As anticipated, the effect of RLV on MRC was negative and significant in all vignettes, providing strong empirical evidence that Ethiopian authorized accountants perceive RLV as negatively influencing their MRC. However, the relationship between RLV and MJD was not supported. Regarding MIT, the effect of RLV showed partial support, where there were significant negative effects in vignette 2 and 3, but not in vignette 1. Accountants inclined toward relativism showed lower MRC and MIT, as their actions were influenced more by situational factors and personal views rather than consistent ethical standards.

Previous studies have found that IDA is a positive predictor and RLV a negative predictor of ethical behavior (Johari et al., 2017; Oboh, 2019; Vedava, 2011). In line with these, the current study demonstrates that authorized accountants with an IDA orientation exhibit a stronger EDM process, particularly in MRC, compared to those with an RLV orientation. This is reflected in the findings of Oboh and Sproat (2024), who noted that accounting students with a strong IDA orientation were less likely to rationalize fraud compared to their RLV counterparts.

Table 21: Hypothesis testing for direct effect of individual attributes on EDM components

	Vignette 1			Vignette 2			Vignette 3			
Hypothesis	***β***	***t* stat**	***p*-value**	***β***	***t* stat**	***p*-value**	***β***	***t* stat**	***p*-value**	**Results**
IRO → MRC	0.213	3.637	0.000	0.153	2.873	0.004	0.374	5.266	0.000	*H2a* fully supported
IRO → MJD	0.232	3.780	0.000	0.300	4.548	0.000	0.279	3.989	0.000	*H2b* fully supported
IRO → MIT	0.229	4.391	0.000	0.256	3.812	0.000	0.283	3.583	0.000	*H2c* fully supported
IDA → MRC	0.264	4.724	0.000	0.275	4.785	0.000	0.181	3.227	0.001	*H3a* fully supported
IDA → MJD	-0.001	0.028	0.977	-0.035	0.672	0.502	0.003	0.055	0.956	*H3b* not supported
IDA → MIT	0.051	1.049	0.294	0.059	1.035	0.301	-0.088	1.557	0.120	*H3c* not supported
RLV → MRC	-0.222	4.639	0.000	-0.251	4.736	0.000	-0.164	3.216	0.001	*H4a* fully supported
RLV → MJD	-0.014	0.234	0.815	0.056	1.121	0.262	0.019	0.337	0.736	*H4b* not supported
RLV → MIT	-0.042	1.017	0.309	-0.126	3.050	0.002	-0.102	2.087	0.037	*H4c* partially supported

The relationship between IDA and RLV in the EDM process of authorized accountants can be examined through deontological and utilitarian ethical theories. Deontological ethics aligns with IDA, as accountants who follow this framework perceive ethical issues as inherently right or wrong, independent of consequences (Forsyth, 1980). This approach enables them to recognize moral issues

clearly, although this recognition does not always lead to MJD or MIT. The duty-focused nature of IDA ensures that MRC is central, but the broader EDM process determines whether the MRC is transformed into MJD and MIT. In contrast, utilitarianism, which emphasizes the consequences of actions, corresponds with RLV. Accountants influenced by RLV evaluate ethical issues based on situational factors and prioritize outcomes that yield the greatest benefit rather than adhering to rigid principles. This relativistic perspective deter MRC and MIT, as shown by the negative influence of RLV on MRC and MIT in this study and in prior research (e.g., Oboh, 2019).

12.3.3.3. Contextual attributes

Contextual attributes play a vital role in influencing the EDM process of authorized accountants. This study specifically examined the effects of SOR, LPC, and PGP on the components of EDM among authorized accountants in Ethiopia. The study's objectives (RO) and the related hypotheses concerning the relationships between these contextual factors and the EDM components are presented below:

RO 4: To identify the relationship between contextual attributes and the components of ethical decision-making.

- ***H5.*** Social responsibility has a significant positive effect on (a) moral recognition, (b) moral judgment, and (c) moral intent.
- ***H6.*** Laws/professional codes has a significant positive effect on (a) moral recognition, (b) moral judgment, and (c) moral intent.
- ***H7.*** Peer group pressure has a significantly positive influence on (a) moral recognition, (b) moral judgment, and (c) moral intent.

Professional accountants who recognize their social responsibilities are better positioned to consider the broader implications of their actions in the public interest, leading to more sound EDM that transcends self-interest. However, the empirical data from Ethiopian authorized accountants on the relationships between SOR and the components of the EDM provided mixed support across the vignettes (see Table 22). The findings demonstrated partial support for the SOR → MRC relationship, suggesting that SOR positively influenced the MRC in certain cases. Additionally, the SOR → MJD relationship was significant in vignettes 1 and 2, indicating a consistent positive effect of SOR on MJD in those contexts. However, the relationship between SOR → MIT was not supported in any of the vignettes. Therefore, these results indicate that although authorized accountants may feel a sense of social responsibility when evaluating ethical issues, this influence does not consistently extend to MIT across all vignettes.

By emphasizing an individual's duty to society and the broader implications of their actions, SOR aligns with utilitarian ethics (Victor & Cullen, 1987), maximizing overall societal benefit (Brady, 1985; Hunt & Vitell, 1986). Accountants who prioritize SOR are more inclined to consider public interest and the long-term effects of their decisions, aiming to generate the greatest good for most people. This

utilitarian perspective explains why SOR often enhances MJD, guiding accountants toward decisions that benefit society, even in situations where immediate outcomes may be challenging.

Previous studies underscore the significance of SOR in individuals' EDM process, indicating its influence on ethical considerations (Barnett & Vaicys, 2000; Shafer, 2008). The study by Shafer (2015) and Shafer et al. (2013) supports these findings, highlighting SOR's importance in the accounting profession for maintaining public interest. However, the study by Liu (2020) identified a positive relationship between SOR and workplace bullying in Chinese audit firms. This finding raises questions about the assumption that a socially responsible climate inherently promotes a supportive and healthy work environment.

External rules and regulations play a crucial role in promoting ethical conduct among professional accountants, highlighting the significance of legal frameworks and professional standards in shaping individuals' EDM. These frameworks provide clear guidance on acceptable and unacceptable behaviors, which is particularly vital in the accounting field, where strict compliance with laws, regulations, and ethical codes is essential. However, the relationships between LPC and the components of EDM provided mixed support across the vignettes (see Table 22). Specifically, the LPC → MRC relationship was consistently insignificant across all vignettes. In contrast, the LPC → MJD relationship was found to be highly significant in all three vignettes. However, the LPC → MIT relationship did not achieve significance in any of the vignettes.

The perspective of LPC aligns with deontological ethics (Brady, 1985; Hunt & Vitell, 1986; Victor & Cullen, 1987). Additionally, it corresponds with Kohlberg's (1973) fourth stage of moral development, known as the 'law and order' orientation, where individuals prioritize societal order by adhering to established regulations. The finding is supported by prior research showing a positive link between LPC adherence and MJD (Hsieh & Wang, 2016; Shafer, 2008). This aligns with Kohlberg's (1973) cognitive-moral development theory, which emphasizes the necessity of following rules, particularly in the accounting profession, where regulatory frameworks and professional standards are crucial in the MJD process.

The intensity and frequency of PGP can significantly influence individuals' EDM. From a deontological standpoint, peer influence that reinforces ethical principles is seen positively, whereas a utilitarian perspective assesses whether such influence promotes the greater societal good (Brady, 1985; Hunt & Vitell, 1986). However, as shown in Table 22, the hypothesized relationships between PGP and the components of EDM lacked empirical support across the vignettes, suggesting that PGP does not have a strong direct influence on the ethical decision-making of Ethiopian authorized accountants.

Despite this, various studies have confirmed the significant influence of peer groups on EDM, showing that ethical conduct among peers often encourages similar behavior (Flynn & Wiltermuth, 2010; Yu et al., 2021). Conversely, Kohlberg (1976) posits that cognitive conflict arises when individuals encounter differing moral reasoning within peer groups, potentially leading them to

reassess their ethical stances. In this context, the current findings suggest that PGP does not override the personal moral reasoning of authorized accountants, emphasizing that external pressures from peers may not consistently shape EDM when accountants hold strong personal ethical convictions.

Table 22: Hypothesis testing for direct effect of contextual attributes on EDM components

	Vignette 1			Vignette 2			Vignette 3			
Hypothesis	***β***	***t* stat**	***p*-value**	***β***	***t* stat**	***p*-value**	***β***	***t* stat**	***p*-value**	**Results**
SOR → MRC	0.084	1.737	0.082	0.117	2.319	0.020	0.104	1.656	0.098	*H5a* partially supported
SOR → MJD	0.113	2.256	0.024	0.134	2.488	0.013	0.093	1.884	0.060	*H5b* partially supported
SOR → MIT	0.029	0.648	0.517	-0.031	0.550	0.582	-0.079	1.351	0.177	*H5c* not supported
LPC → MRC	0.032	0.806	0.420	0.008	0.183	0.855	0.027	0.631	0.528	*H6a* not supported
LPC → MJD	0.259	4.509	0.000	0.329	6.144	0.000	0.296	4.932	0.000	*H6b* fully supported
LPC → MIT	0.039	0.910	0.363	-0.046	0.777	0.437	-0.058	1.122	0.262	*H6c* not supported
PGP → MRC	-0.121	3.020	0.003	-0.068	1.541	0.123	-0.049	1.040	0.298	*H7a* not supported
PGP → MJD	0.023	0.365	0.715	-0.004	0.078	0.938	0.027	0.417	0.677	*H7b* not supported
PGP → MIT	-0.049	1.056	0.291	-0.030	0.544	0.586	-0.017	0.305	0.761	*H7c* not supported

In addition to the initial specific objectives, introducing a mediating construct in the path relationships of SEM creates additional direct relationships between constructs that were not addressed by the initial objectives. Therefore, the following hypotheses examine the relationships between the exogenous constructs and the mediator, as well as between the mediator and the endogenous constructs.

H8. Moral intensity has a significant positive effect on (a) moral recognition, (b) moral judgment, and (c) moral intent.

H9. Intrinsic religious orientation has a significant positive effect on moral intensity.

H10. Idealism has a significant positive effect on moral intensity.

H11. Relativism has a significant negative effect on moral intensity.

H12. Social responsibility has a significant positive effect on moral intensity.

H13. Laws/professional codes has a significant positive effect on moral intensity.

H14. Peer group pressure has a significant positive effect on moral intensity.

The relationships between MIS and the components of EDM showed varying levels of support across the vignettes (see Table 23). The direct effect of MIS on MRC was positive and significant in all three vignettes, as was the effect of MIS on MJD. However, the relationship between MIS and MIT yielded mixed results: it was significant in vignette 2 but insignificant in vignette 1 and 3. These findings indicate that while MIS consistently influenced MRC and MJD among professional accountants in Ethiopia, its effect on MIT was context dependent. As shown in Table 23, the relationships between the exogenous constructs and MIS yielded varying results. The relationships between IRO and MIS were positive and significant across all vignettes, as were the relationships between IDA and MIS. In contrast, the effect of RLV on MIS was consistently negative and significant across all vignettes. The SOR → MIS relationship was insignificant in every vignette, while the LPC → MIS relationship showed significance only in vignette 1, with

results in vignettes 2 and 3 being insignificant. Lastly, the relationship between PGP and MIS remained insignificant in all vignettes.

Table 23: Hypothesis testing for direct relationships of mediator

	Vignette 1			Vignette 2			Vignette 3			
Hypothesis	***β***	***t* stat**	***p*-value**	***β***	***t* stat**	***p*-value**	***β***	***t* stat**	***p*-value**	**Results**
MIS → MRC	0.327	6.493	0.000	0.299	5.705	0.000	0.212	3.991	0.000	*H8a* fully supported
MIS → MJD	0.222	3.554	0.000	0.191	3.622	0.000	0.178	2.935	0.003	*H8b* fully supported
MIS → MIT	0.086	1.581	0.114	0.218	3.708	0.000	0.086	1.437	0.151	*H8c* partially supported
IRO → MIS	0.341	4.712	0.000	0.359	5.103	0.000	0.390	6.642	0.000	*H9* fully supported
IDA → MIS	0.201	2.983	0.003	0.208	2.913	0.004	0.252	4.384	0.000	*H10* fully supported
RLV → MIS	-0.186	3.028	0.002	-0.128	2.154	0.031	-0.159	2.927	0.003	*H11* fully supported
SOR → MIS	0.073	1.111	0.267	0.071	1.050	0.294	0.010	0.160	0.873	*H12* not supported
LPC → MIS	0.139	2.415	0.016	0.071	1.119	0.263	0.044	0.745	0.456	*H13* partially supported
PGP → MIS	-0.064	1.048	0.295	-0.010	0.153	0.878	0.031	0.494	0.621	*H14* not supported

12.3.4. Hypothesis testing (mediating effect)

12.3.4.1. The mediating role of moral judgment

This mediation analysis aimed to determine whether MJD mediated the relationship between MRC and MIT across the three vignettes. In this regard, the objective and hypothesis pertaining to this relationship are presented below:

RO 2: To examine the mediating role of moral judgment in the relationships between moral recognition and moral intent.

H1d. Moral judgment mediates the relationship between moral recognition and moral intent.

The direct effect of MRC on MIT in vignettes 1 and 3 was significant (see Table 20). As shown in Table 24, the indirect effect (MRC → MJD → MIT) was significant in vignettes 1 and 2 but insignificant in vignette 3. This suggests that MJD mediates the relationship between MRC and MIT, though its influence varies across different ethical contexts. These findings support Rest's (1986) framework, showing that the EDM components interact each other, aligning with previous studies (Andersch et al., 2019; Johari et al., 2017; Yang & Wu, 2009). The results reinforce the theoretical underpinnings of EDM, highlighting that the components' roles extend beyond the direct relationship.

Table 24: Hypothesis testing for moral judgment mediation role

	Vignette 1			Vignette 2			Vignette 3			
Hypothesis	***β***	***t* stat**	***p*-value**	***β***	***t* stat**	***p*-value**	***β***	***t* stat**	***p*-value**	**Results**
MRC → MJD → MIT	0.050	2.232	0.026	0.047	2.112	0.035	0.042	1.709	0.087	*H1d* partially supported

12.3.4.2. The mediating role of moral intensity between individual attributes and EDM

The objective and the underlying hypotheses regarding the mediating role of MIS in the relationships between individual attributes and the components of EDM are presented below:

RO 5: To examine the mediating role of moral intensity in the relationships between individual attributes and the components of the ethical decision-making process.

- ***H15.*** Moral intensity mediates the relationship between intrinsic religious orientation and (a) moral recognition, (b) moral judgment, and (c) moral intent.
- ***H16.*** Moral intensity mediates the relationship between idealism and (a) moral recognition, (b) moral judgment, and (c) moral intent.
- ***H17.*** Moral intensity mediates the relationship between relativism and (a) moral recognition, (b) moral judgment, and (c) moral intent.

In the relationships between IRO and the components of EDM, MIS played a notable mediating role across the vignettes. The direct effect of IRO on MRC was significant in all vignettes (see Table 21), as were the indirect effects through MIS (see Table 25). Similarly, the relationship between IRO and MJD showed significant direct effect and mediated through MIS across all vignettes. However, for IRO → MIS → MIT, the results were mixed. While the direct effects were significant in all vignettes (see Table 21), the indirect effect through MIS was significant only in vignette 2.

The mediating role of MIS between IDA and the EDM components varied. IDA had a positive direct effect on MRC in all vignettes (see Table 21), and the indirect effect through MIS was also significant across all vignettes (see Table 25). However, the direct relationship between IDA and MJD was insignificant in every vignette, with MIS fully mediating this relationship. For the IDA → MIT relationship, the direct effects were insignificant across all vignettes, while the indirect effect through MIS was significant only in vignette 2. This suggests that MIS fully mediated the IDA → MIT relationship only in vignette 2. Overall, MIS significantly mediated the relationships between IDA and both MRC and MJD, but its effect on MIT was context dependent.

Table 25: Hypothesis testing: mediating role of MIS between individual attributes and EDM

	Vignette 1			Vignette 2			Vignette 3			
Hypothesis	***β***	***t* stat**	***p*-value**	***β***	***t* stat**	***p*-value**	***β***	***t* stat**	***p*-value**	**Results**
IRO→MIS→MRC	0.112	3.545	0.000	0.107	3.737	0.000	0.083	3.429	0.001	*H15a* fully supported
IRO→MIS→MJD	0.076	2.632	0.008	0.069	2.939	0.003	0.069	2.761	0.006	*H15b* fully supported
IRO→MIS→MIT	0.029	1.381	0.167	0.078	2.958	0.003	0.034	1.391	0.164	*H15c* partially supported
IDA→MIS→MRC	0.066	2.659	0.008	0.062	2.787	0.005	0.053	2.802	0.005	*H16a* fully supported
IDA→MIS→MJD	0.045	2.325	0.020	0.040	2.263	0.024	0.045	2.427	0.015	*H16b* fully supported
IDA→MIS→MIT	0.017	1.395	0.163	0.045	2.433	0.015	0.022	1.353	0.176	*H16c* partially supported
RLV→MIS→MRC	-0.061	2.672	0.008	-0.038	1.812	0.070	-0.034	2.169	0.030	*H17a* partially supported
RLV→MIS→MJD	-0.041	2.218	0.027	-0.024	1.826	0.068	-0.028	2.012	0.044	*H17b* partially supported
RLV→MIS→MIT	-0.016	1.419	0.156	-0.028	1.701	0.089	-0.014	1.241	0.215	*H17c* not supported

As shown in Table 25, the mediating role of MIS in the relationship between RLV and the EDM components varied across vignettes. The direct effect of RLV on MRC was consistently significant and negative in all vignettes (see Table 21), but the indirect effect through MIS was only partially supported. Regarding RLV → MJD, the direct effects were insignificant, but MIS fully mediated

the relationship in vignettes 1 and 3. For RLV → MIT, the direct effects were significant only in vignettes 2 and 3, with no mediation observed. These results suggest that the negative impact of RLV on the EDM process was context-dependent, particularly in its mediated effects through MIS.

12.3.4.3. The mediating role of moral intensity between contextual attributes and EDM

The objective and the underlying hypotheses regarding the mediating role of MIS in the relationships between contextual attributes and the components of EDM are presented below:

RO 6: To examine the mediating role of moral intensity in the relationships between contextual attributes and the components of the ethical decision-making process.

- ***H18.*** Moral intensity mediates the relationship between social responsibility and (a) moral recognition, (b) moral judgment, and (c) moral intent.
- ***H19.*** Moral intensity mediates the relationship between laws/professional codes and (a) moral recognition, (b) moral judgment, and (c) moral intent.
- ***H20.*** Moral intensity mediates the relationship between peer group pressure and (a) moral recognition, (b) moral judgment, and (c) moral intent.

The relationships between SOR and the components of EDM through MIS were not substantially demonstrated across the vignettes (see Table 26). The direct effect of SOR on MRC was significant only in vignette 2 (see Table 22), and the indirect effect via MIS was not supported in any vignette (see Table 26). For the SOR → MJD relationship, the direct effects were partially supported in vignettes 1 and 2, but the indirect effects through MIS were not significant across any vignette. Furthermore, the SOR → MIT relationship showed no significant direct or indirect effects, indicating that SOR had no influence on MIT, either directly or through MIS mediation.

As shown in Table 26, the mediating role of MIS in the relationships between LPC and the EDM components was also limited. The direct effect of LPC on MRC was insignificant across all vignettes (see Table 22), though there was partial support for the indirect effect through MIS in vignette 1. The LPC → MJD relationship was fully supported across all vignettes, with partial mediation by MIS in vignette 1. However, for the LPC → MIT relationship, neither direct nor indirect effects were significant, suggesting that LPC did not influence MIT, either directly or via MIS mediation. These findings illustrate the variability in the mediation and direct effects of LPC on the EDM process among authorized accountants in Ethiopia, depending on the ethical scenario.

Lastly, PGP did not significantly influence any of the EDM components, either directly or through MIS mediation (see Table 26). The direct and indirect effects of PGP on MRC were unsupported across all vignettes (see Table 22). Similarly, the direct and indirect effects of PGP on MJD and MIT were also insignificant. This consistent lack of support suggests that PGP did not affect the MRC, MJD, or MIT of authorized accountants in Ethiopia, either directly or via MIS.

According to Jones (1991), MIS evaluates the intensity of ethical dilemmas by considering factors such as the magnitude of consequences and social consensus. A heightened perception of MIS encourages individuals to carefully weigh potential outcomes (Barnett, 2001; Leitsch, 2004; May

& Pauli, 2002). This concept aligns with utilitarian ethics (Barnett & Valentine, 2004), which emphasizes outcomes and the aim to maximize overall well-being (Brady, 1985; Hunt & Vitell, 1986). Consequently, individuals guided by MIS assess ethical dilemmas based on the harm or benefit they might generate.

Table 26: Hypothesis testing: mediating effect of MIS between contextual attributes and EDM

	Vignette 1			Vignette 2			Vignette 3			
Hypothesis	***β***	***t* stat**	***p*-value**	***β***	***t* stat**	***p*-value**	***β***	***t* stat**	***p*-value**	**Results**
SOR→MIS→MRC	0.024	1.104	0.270	0.021	1.019	0.308	0.002	0.157	0.875	*H18a* not supported
SOR→MIS→MJD	0.016	1.064	0.287	0.014	0.974	0.330	0.002	0.152	0.879	*H18b* not supported
SOR→MIS→MIT	0.006	0.810	0.418	0.015	0.966	0.334	0.001	0.133	0.894	*H18c* not supported
LPC→MIS→MRC	0.045	2.204	0.028	0.021	1.085	0.278	0.009	0.733	0.464	*H19a* partially supported
LPC→MIS→MJD	0.031	2.027	0.043	0.014	1.016	0.309	0.008	0.700	0.484	*H19b* partially supported
LPC→MIS→MIT	0.012	1.210	0.226	0.015	1.031	0.303	0.004	0.555	0.579	*H19c* not supported
PGP→MIS→MRC	-0.021	1.009	0.313	-0.003	0.154	0.878	0.007	0.481	0.631	*H20a* not supported
PGP→MIS→MJD	-0.014	0.985	0.324	-0.002	0.148	0.882	0.005	0.458	0.647	*H20b* not supported
PGP→MIS→MIT	-0.006	0.741	0.459	-0.002	0.148	0.883	0.003	0.389	0.697	*H20c* not supported

Empirical studies support the present findings, showing that MIS significantly influence MRC and MJD (Arnold et al., 2013; Johari et al., 2017; Singhapakdi et al., 1999; Valentine & Godkin, 2019; Watley & May, 2004). However, some studies have reported inconsistent findings regarding the relationship between MIS and EDM components (Moores et al., 2018; Oboh, 2019).

12.4. Combined importance-performance map analysis (cIPMA)

Hauff et al. (2024) methodologically integrated IPMA and NCA, referring to this method as cIPMA. According to the authors, this method assesses importance based on the outcome or the predefined desired level of the target construct, while performance is evaluated by examining the number of cases that fall below the necessary thresholds, thereby emphasizing the identification of necessary conditions. This integrated methodology enhances the ability to discern subtle dimensions within path relationships and offers a deeper understanding of the data.

To achieve the study's objectives regarding the necessary condition aspects of constructs in relation to the final target construct, MIT, within the structural model, this section tests the underlying hypotheses using the cIPMA methodology. The objectives and the corresponding hypotheses are as follows:

RO 7: To explore whether moral recognition and moral judgment are necessary conditions for moral intent.

H1e. Moral recognition is a necessary condition for moral intent.

H1f. Moral judgment is a necessary condition for moral intent.

RO 8: To explore whether individual attributes, contextual attributes and moral intensity are necessary conditions for moral intent.

H2d. Intrinsic religious orientation is a necessary condition for moral intent.

H3d. Idealism is a necessary condition for moral intent.

H5d. Social responsibility is a necessary condition for moral intent.

H6d. Laws/professional codes is a necessary condition for moral intent.

H7d. Peer group pressure is a necessary condition for moral intent.

H8d. Moral intensity is a necessary condition for moral intent.

All antecedent constructs, except MJD, exhibited indirect effects on MIT. Therefore, the total effects on MIT, encompassing both direct and indirect effects, represent the importance dimension of the IPMA, i.e., *x*-axis (see Figure 6). The *y*-axis denotes the low to high performances of antecedent constructs in terms of an average score rescaled from 0 to 100. The performance dimension on the *y*-axis is depicted by the MRC, MJD, MIS, IRO, IDA, SOR, LPC, and PGP scores, where higher values imply greater performance. The IPMA is segmented into four distinct areas by two lines representing the mean values of importance and performance across the three vignettes (see Figure 6). Thus, the two additional dotted lines represent the overall mean importance value (vertical line) and the overall mean performance value (horizontal line) across the three vignettes.

Table 28 presents the total effects of the antecedent constructs on the target construct (MIT) across the vignettes. The total effects revealed significant relationships between the constructs and the target construct of MIT related to authorized accountants, with only a few exceptions. Based on the total effect values, the mean importance varied slightly across the vignettes, ranging from 0.225 to 0.258. The overall mean importance value for all constructs' effect on MIT across the vignettes was 0.236.

Table 27: Total effect based on PLS-SEM result

	Vignette 1			**Vignette 2**			**Vignette 3**		
Relationship*	**Total effects**	***t* stat**	***p*-value**	**Total effects**	***t* stat**	***p*-value**	**Total effects**	***t* stat**	***p*-value**
IDA → MIT	0.269	4.273	0.000	0.218	2.809	0.005	0.083	1.187	0.235
IRO → MIT	0.648	8.291	0.000	0.689	7.756	0.000	0.779	9.704	0.000
LPC → MIT	0.159	3.000	0.003	0.078	1.265	0.206	0.041	0.725	0.469
MIS → MIT	0.300	5.000	0.000	0.349	5.448	0.000	0.271	3.908	0.000
MJD → MIT	0.255	4.697	0.000	0.265	4.641	0.000	0.260	3.712	0.000
MRC → MIT	0.385	4.848	0.000	0.170	2.589	0.010	0.381	4.807	0.000
PGP → MIT	-0.096	1.576	0.115	-0.038	0.561	0.575	-0.014	0.234	0.815
SOR → MIT	0.141	2.226	0.026	0.066	0.852	0.394	-0.005	0.079	0.937
Mean	0.258			0.225			0.225		

Table 29 presents the average performance values of the antecedent and target constructs across three vignettes derived from the IPMA results. The performance values for most antecedent constructs remained relatively consistent across vignettes, with minor variations. As shown in Table 29, the mean performance values across the vignettes are 62.369, 63.365, and 62.752, respectively, resulting in an overall mean performance value of 62.829.

Table 28: IPMA results for performance values (rescaled)

Construct	Vignette 1	Vignette 2	Vignette 3
MIT	69.962	71.131	65.915
IDA	68.677	68.657	68.661
IRO	66.031	66.040	66.018
LPC	64.686	64.694	64.704
MIS	63.188	68.072	66.974
MJD	65.776	68.548	66.808
MRC	65.965	67.260	64.593
PGP	64.508	64.512	64.506
SOR	69.948	69.971	69.978
Mean*	62.369	63.365	62.752

Note: *: MIT not included in mean computation.

As recommended by Richter et al. (2023) and supported by Hauff et al. (2024) in similar analyses using the cIPMA framework, this study employed the ceiling envelopment-free disposal hull (CE-FDH) approach due to the discrete nature of the dataset (i.e., 5-point Likert scale). As shown in Table 30, the NCA results revealed varying levels of support for the relationships between antecedent constructs and the target construct across different vignettes. Most antecedent constructs emerged as necessary conditions for the MIT of authorized accountants, with effect sizes exceeding the threshold ($d > 0.100$) and achieving statistical significance at $p < 0.05$.

Table 29: Necessity effect size (*d*)

Antecedent	Vignette 1		Vignette 2		Vignette 3		
Construct	*d*	*p*-value	*d*	*p*-value	*d*	*p*-value	Result
MRC	0.179	0.000	0.195	0.000	0.182	0.000	*H1e* fully supported
MJD	0.150	0.000	0.169	0.000	0.240	0.001	*H1f* fully supported
IRO	0.268	0.000	0.172	0.000	0.189	0.006	*H2d* fully supported
IDA	0.187	0.000	0.119	0.028	0.175	0.091	*H3d* partially supported
SOR	0.209	0.000	0.159	0.002	0.218	0.002	*H5d* fully supported
LPC	0.037	0.395	0.031	0.179	0.072	0.513	*H6d* not supported
PGP	0.037	0.480	0.058	0.019	0.119	0.030	*H7d* partially supported
MIS	0.146	0.000	0.199	0.000	0.120	0.634	*H8d* partially supported

Note: *d*: ceiling envelopment–free disposal hull (CE-FDH) effect size

According to Richter et al. (2023), the bottleneck table in NCA highlights the levels of antecedent constructs required to achieve specific levels of an outcome construct. Setting a desired MIT outcome of 85, which serves as a relatively conservative (i.e., high) benchmark (Hauff et al., 2024), the percentile bottleneck table was used to determine the percentage of cases that failed to meet the required levels for antecedent constructs and accordingly portray the cIPMA (see Table 31).

Table 30: Bottleneck table for moral intent - CE-FDH percentiles

Vignette 1								
MIT	**IDA**	**IRO**	**LPC**	**MIS**	**MJD**	**MRC**	**PGP**	**SOR**
50	2.258	5.161	0	4.194	0	1.935	0	0.645
55	2.258	5.161	0	4.194	0	1.935	0	0.645
60	2.258	10.323	0	4.194	0	1.935	0	0.645
65	2.258	10.323	0	6.129	0	1.935	0	0.645
70	8.710	10.323	0	7.742	1.935	3.226	0	0.645
75	8.710	10.323	0	9.355	8.710	3.226	0	3.226
80	8.710	10.323	0	9.355	18.710	3.226	1.613	8.387
85	***8.710***	***13.871***	***4.516***	***9.355***	***18.710***	***3.226***	***1.613***	***8.387***
90	8.710	15.806	4.516	9.355	28.387	20.645	1.613	28.065
95	8.710	21.613	4.516	9.355	51.935	20.645	1.613	31.935
100	8.710	21.613	5.161	9.355	51.935	20.645	1.613	31.935
Vignette 2								
MIT	**IDA**	**IRO**	**LPC**	**MIS**	**MJD**	**MRC**	**PGP**	**SOR**
50	0	0	0	5.161	0.645	4.516	0	0.645
55	0	0	0	5.161	0.645	4.516	0	0.645
60	0	0	0	5.161	0.645	4.516	0	0.645
65	0	0	0	5.161	0.645	4.516	0	0.645
70	0	6.774	0	8.710	0.645	5.806	0	3.226
75	0	6.774	0	8.710	11.613	5.806	0	3.226
80	0	6.774	0	8.710	12.258	5.806	3.871	3.226
85	***10.645***	***10.323***	***3.226***	***8.710***	***14.194***	***16.452***	***3.871***	***3.226***
90	10.645	19.677	3.226	8.710	17.419	16.452	4.516	3.226
95	10.645	19.677	3.226	8.710	17.419	16.452	4.516	3.226
100	10.645	19.677	3.226	8.710	17.419	16.452	4.516	3.226
Vignette 3								
MIT	**IDA**	**IRO**	**LPC**	**MIS**	**MJD**	**MRC**	**PGP**	**SOR**
55	0	0.323	0	0	0.323	3.548	0	0.968
60	0	0.323	0	0	0.323	3.548	0	0.968
65	0	0.323	0	0	4.839	3.548	1.613	0.968
70	0	0.323	0	0	4.839	3.548	1.613	0.968
75	0	0.323	0	0	4.839	3.548	1.613	0.968
80	0	0.323	0	0	4.839	3.548	3.548	0.968
85	***15.161***	***22.581***	***2.903***	***10***	***17.742***	***25.161***	***13.226***	***16.452***
90	27.742	27.097	13.548	10.645	17.742	44.839	26.129	39.677
95	27.742	33.548	31.935	29.032	25.806	44.839	26.129	39.677
100	27.742	33.548	31.935	29.032	25.806	44.839	26.129	39.677

Following Hauff et al. (2024) guidelines, results presented in Tables 28, 29, 30, and 31 were used to portray the cIPMA. Figure 6 presents the total effects of antecedent constructs on MIT as measures of importance and assesses the performance of antecedent constructs based on rescaled latent variable scores. Shaded bubbles indicate constructs that are not necessary conditions for achieving MIT. For constructs deemed necessary conditions, the bubble size reflects the proportion

of cases that failed to reach the required level (i.e., 85) for that construct relative to other constructs within the same vignette.

Regarding the components of EDM, MRC and MJD emerged as relatively consistent constructs in terms of importance and performance across all vignettes (see Figure 6). This was further emphasized by the fact that both were necessary conditions for MIT in every vignette. However, MRC and MJD required attention, as a sizable portion of cases did not meet the required levels (see Table 31). These findings indicated that authorized accountants perceived MRC and MJD as necessary conditions in forming MIT, irrespective of the ethical issues presented across the vignettes. The empirical results fully supported H1e and H1f.

IRO emerged as the most important antecedent construct across all vignettes. This is further emphasized by the fact that it is a necessary condition for MIT in every vignette and fully supports H2d. However, IRO requires attention, as a significant portion of cases (see Table 31) have not met IRO's required level. These findings indicated that authorized accountants perceive IRO as a necessary condition in forming MIT, irrespective of the ethical issues. Furthermore, performance improvements in the IRO are essential, as it currently falls below the overall mean value.

Although MIS was not a necessary condition in vignette 3 (partially supported H8d), it emerged as a consistent construct regarding importance and performance in vignettes 1 and 2. These findings indicated that authorized accountants perceived the nature of ethical issues as a necessary condition in forming MIT in vignettes 1 and 2 (H8d partially supported). In contrast, MIS requires performance improvement prioritization in vignette 1, as its importance was incomparable to its performance. Notably, IDA was a necessary condition for authorized accountants' MIT in the first and second vignettes, with 8.7% and 10.6% of cases failed to meet the required levels in vignettes 1 and 2, respectively (partially supported H3d).

Across the three vignettes, SOR consistently emerged as a common factor with high performance and, except in the first vignette, exhibited low importance in influencing MIT. Although SOR was associated with low importance for MIT, it corroborated a necessary condition for authorized accountants' MIT across all vignettes (fully supported H5d). However, a relative number of cases failed to meet the required levels (8.4% in vignette 1 and 16.5% in vignette 3). Despite its low importance compared to other antecedent constructs, SOR did not require prioritization efforts, as it had already achieved high performance.

LPC remained below the mean values of importance and performance across all vignettes and was not a necessary condition for MIT (not supported H6d). This finding highlighted that the role of LPC in forming MIT among authorized accountants diminished. Vignette 3 highlighted the necessary condition of PGP for MIT (partially supported H7d), even though PGP consistently remained below the mean value in terms of importance and performance across the vignettes.

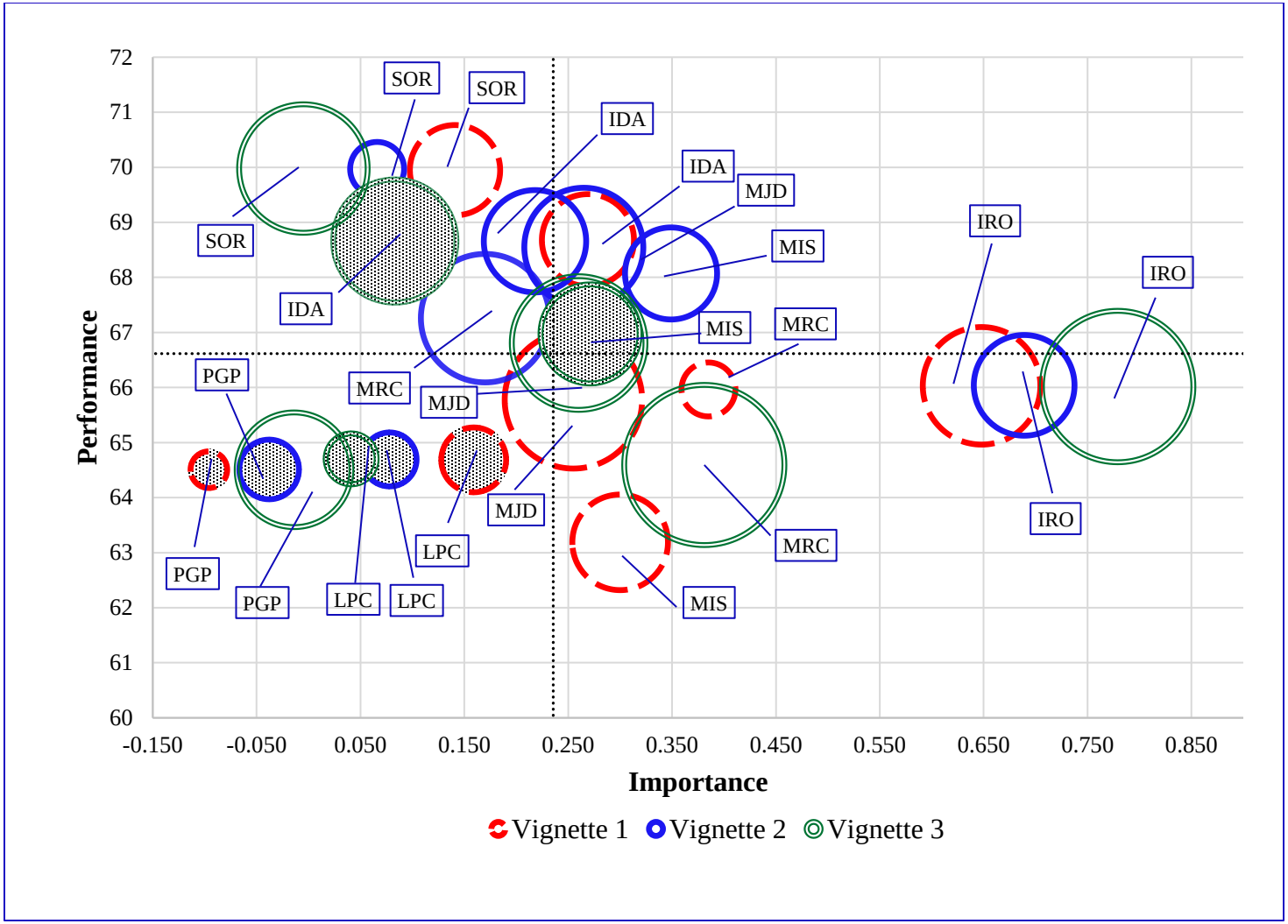

Figure 6: Combined importance-performance map of moral intent

Note: Bubbles without shade represent the construct is necessary condition for MIT, while the other bubbles that have shade represent the construct is not necessary conditions for MIT. The sizes of bubbles signify the percentage of cases that did not achieve the desired outcome level (i.e., 85) relative to the other constructs in the respected vignette.

13. Suggestions and conclusions

The study provided valuable insights into the EDM process among authorized accountants in Ethiopia by integrating Rest's (1986) model with individual, contextual, and moral intensity factors. Using PLS-SEM methodology, the study confirmed the necessity of progressing through four stages in the EDM process, aligning with Rest's assertion that failure at any stage can hinder moral behavior. The findings demonstrated a consistent relationship between MRC, MJD, and MIT across various ethical dilemmas, shedding light on how authorized accountants recognize, evaluate, and intend to act when faced with ethical issues.

The study expanded the theoretical model of EDM by highlighting the mediating role of MJD in the relationship between ethical issue recognition and the intention to act ethically. Results indicated that MJD not only evaluates ethical issues but also mediates relationships within the EDM process. The study also examined the mediating role of MIS in the relationships between individual attributes and contextual attributes with the components of EDM. Furthermore, the study enhanced understanding of EDM relationships using cIPMA. The findings supported both deontological and utilitarian ethical theories as frameworks for recognizing, evaluating, and forming intentions about ethical issues.

The study also revealed that a strong IRO positively influenced ethical behavior, with accountants who possessed this attribute being more likely to recognize and evaluate ethical issues. This aligns with prior research indicating that intrinsic religiosity strengthens commitment to ethical principles, facilitating the EDM process. IDA was found to significantly influence both MRC and MJD, reinforcing the value of adherence to ethical standards in evaluating ethical dilemmas. Conversely, RLV negatively affected the EDM process by promoting a flexible approach to ethical standards, potentially leading to moral disengagement.

Contextual factors such as SOR and LPC shaped MJD, with strong SOR related with morally sound MRC and MJD. However, SOR did not significantly affect MIT, suggesting that a sense of responsibility does not always translate into intentions to act ethically. LPC supported MJD but did not significantly influence MRC or MIT, highlighting that formal guidelines assist in evaluating ethical dilemmas but do not guarantee issue recognition or intention formation. Interestingly, the study found no significant empirical support for PGP influencing MRC, MJD, or MIT, suggesting that individuals in high-stakes professions like accounting may prioritize personal moral reasoning over peer influences. While MIS was found to enhance recognition and evaluation of ethical issues, its influence on MIT was less consistent. The results reinforced that high MIS facilitates the EDM process but does not automatically lead to strong intentions to act ethically.

The cIPMA results revealed that certain factors confirmed their role as necessary conditions in the EDM process for authorized accountants. For the target outcome construct of MIT, the two components of EDM (i.e., MRC and MJD) and IRO, IDA, SOR, LPC, and PGP exhibited varying importance and performance across vignettes. Comparatively, except LPC and PGP, all constructs corroborated their role as necessary conditions for MIT. This indicates that not all factors

contribute equally to the EDM process of authorized accountants; instead, the relative importance of these factors varied depending on the specific ethical dilemma faced.

13.1. Theoretical implications

The study makes several contributions to the theoretical understanding of EDM. In this regard, it provides a comprehensive understanding of how professional accountants engage in EDM. It integrates Rest's model with individual and contextual attributes mediated by MIS, confirming the importance of MRC, MJD, and MIT as vital stages in the EDM process. The findings offer strong empirical evidence for the EDM process, demonstrating that its components are necessary conditions for moral behavior. The study highlights the need for a framework that considers the cognitions and affects interface, enabling ethical environments and promoting responsible EDM among professional accountants. It also provides compelling empirical evidence for the mediating role of MJD in the relationships between the components of EDM, highlighting how recognizing ethical dilemmas significantly influences individuals' subsequent intentions and behaviors.

13.2. Practical implications

The study offers contributions to practical applications and policy interventions aimed at promoting ethical behavior within the accounting profession. For professional accountants, the results emphasize the importance of developing a strong ethical foundation based on the EDM process. The findings suggest that policy interventions should focus on designing policies and frameworks for ethical behavior by the professional bodies and regulators of the accounting profession. The study underscores the vital importance of following the logical sequences of the EDM process. The study suggests that interventions for promoting ethical behavior should focus on improving all stages of the EDM process. While individual and contextual attributes may have mixed effects on the EDM process, it is imperative to consider specific ethical situations when assessing the influence of these attributes.

14. Scope for further research

The study provides valuable insights into the EDM process of professional accountants, but it also has some limitations. One limitation is the use of vignettes to measure the EDM process, which may not fully represent the actual ethical dilemmas accountants face. Another limitation is the reliance on self-reported data, which may be influenced by social desirability bias. Third, the sample is limited to authorized accountants in Ethiopia, which limits the generalizability of the findings. Fourth, the study examined a limited set of individual and contextual attributes within the EDM process, and future studies could expand the range of constructs examined. Finally, future research could address additional limitations by employing different research designs and developing tailored measurement tools for the constructs.

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